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Table of Contents

Vol. 38, No. 30 — December 7, 1939

News Developments

Summary ... 13
Pipe-Line Expansion Program to Continue in 1940 ... *Paul Reed* 14
Nebraska Activity Increases ... *Dal Dalrymple* 16
Sparks From the News ... 18
The Possibility of Further Oil Discovery in Mississippi ... *H. M. Morse* 19
Opposition to Cole Bill Spreading ... 21
News From State Capitals ... 22
Editorial: Pennsylvania Prescription ... 23
Stripper Well Association Opposes Federal Control ... 24
Pennsylvania Crude Advance Reflects Strong Position ... *John P. O'Donnell* 24
Hull Defends Trade Treaty, Answering Oil Critics ... *Henry D. Ralph* 25
Activity in Hull-Silk Field Increases Rapidly ... *D. H. Stormont* 26
Obituaries ... 28
Leasing Spreading in Mississippi and Extending Into Alabama ... *George Weber* 29
Natural Gasoline ... 30
Natural-Gas News ... 30
Refinery Activity ... 30
Pipe-Line Projects ... 31
Program Page ... 32
Service on New Fields—Loco Hills, New Mexico ... 33
International News ... 36
Mexican Supreme Court Upholds Expropriation ... 111

Engineering—Operating

Automatic Operation to Feature Magnolia's New East Texas Butane Pipe-Line System ... *D. H. Stormont* 38
Engineers Study Full Effect of Water Flooding in Bradford Field ... *J. P. O'Donnell* 43
Safety—Platform for Attaching Backside Pump ... 46
Operating Ideas ... 49
Progress in Metals ... *Prof. W. L. Nelson* 50
Shell Overcomes Caving to Bring in Coastal Well ... *Neil Williams* 55
Questions on Technology ... *C. K. Francis, Ph.D.* 59

Field Operations

Field Operations Summarized ... 63
Illinois, Indiana, Kentucky ... 64
Kansas and Missouri ... *Dal Dalrymple* 66
Gulf Coast ... *Neil Williams* 69
Among Drilling Contractors ... 70
Eastern Fields ... *Staff Correspondent* 72
Louisiana and Arkansas ... *George Weber* 73
Canada ... 74
California ... *L. P. Stockman* 75
Oklahoma ... *Dal Dalrymple* 77
Southwest Texas ... *F. L. Singleton* 79
North and East Texas ... *D. H. Stormont* 80
Rocky Mountain Area ... *T. R. Ingram* 82
West and Central Texas and Panhandle ... *D. H. Stormont* 86
Michigan ... *Otto C. Pressprich* 89
Wildcats ... 91
Key to Abbreviations ... 91

Markets and Prices

Group 3 Market ... *T. F. Smiley* 100
New York Market ... *H. Stanley Norman* 101
Tank-Wagon Market ... 102
Refinery Prices ... 103
Crude-Oil Prices ... 104

Additional Features

California Summary ... 88
Personal Paragraphs ... 98
Record of Oil Securities ... 106
Equipment News ... 107
Classified Advertising ... 110
Advertisers' Index ... 112

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BAKER
ROTARY
WALL SCRAPER

The Baker Rotary Wall Scraper provides a safe, efficient means of enlarging the walls of an open hole to a diameter considerably greater than the casing or hole through which tool is run.

REMARKABLE REAMING CAPACITY

One of the outstanding features of the Baker Rotary Wall Scraper is its remarkable reaming capacity in relation to the O. D. of the tool. It has a maximum expansion on the Cutter Blades ranging from 4" to 36".

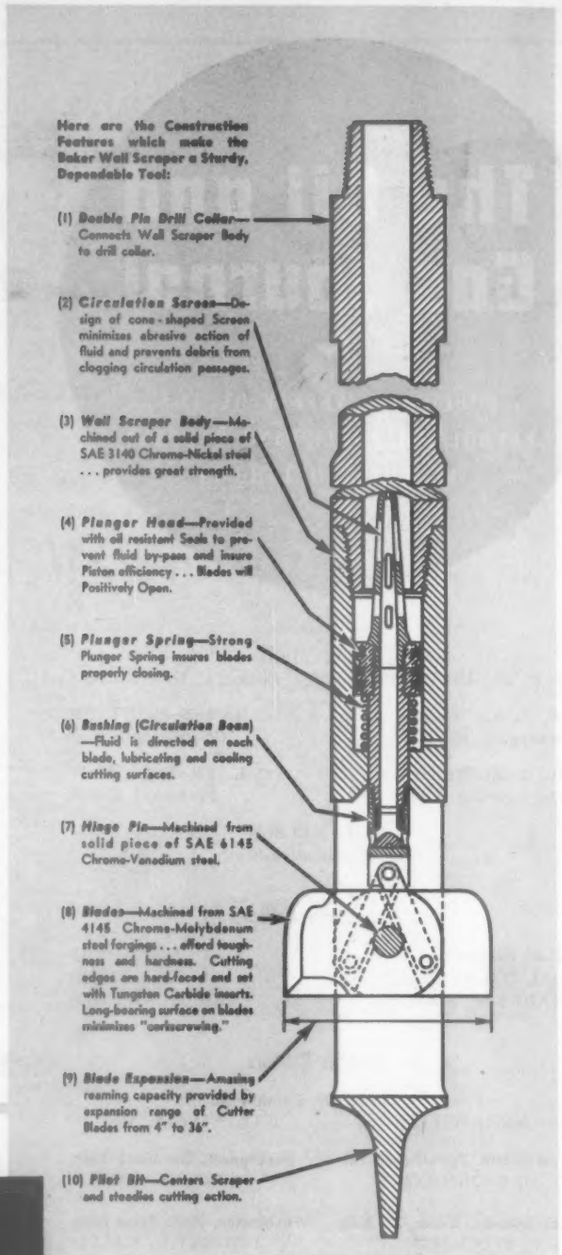
SAFETY

The safety of this tool has been ably demonstrated in the thousands of successful runs made in oil fields throughout the world under most adverse operating conditions.

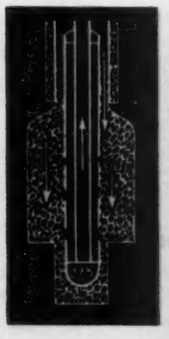
Send for Baker Broadcast No. 19, a 40-page illustrated treatise giving complete information concerning the important applications for the Baker Wall Scraper.

BAKER OIL TOOLS, INC.

HUNTINGTON PARK, CALIF. • HOUSTON, TEXAS

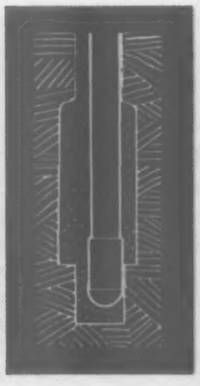

Here are the Construction Features which make the Baker Wall Scraper a Sturdy, Dependable Tool:
(1) Double Pin Drill Collar—Connects Wall Scraper Body to drill collar.
(2) Circulation Screen—Design of cone-shaped Screen minimizes abrasive action of fluid and prevents debris from clogging circulation passages.
(3) Wall Scraper Body—Machined out of a solid piece of SAE 3140 Chrome-Nickel steel . . . provides great strength.
(4) Plunger Head—Provided with oil resistant Seals to prevent fluid by-pass and insure Piston efficiency . . . Blades will Positively Open.
(5) Plunger Spring—Strong Plunger Spring insures blades properly closing.
(6) Bushing (Circulation Base)—Fluid is directed on each blade, lubricating and cooling cutting surfaces.
(7) Hinge Pin—Machined from solid piece of SAE 6145 Chrome-Vanadium steel.
(8) Blades—Machined from SAE 4145 Chrome-Molybdenum steel forgings . . . afford toughness and hardness. Cutting edges are hard-faced and set with Tungsten Carbide inserts. Long-bearing surface on blades minimizes "corkscrewing."
(9) Blade Expansion—Amazing reaming capacity provided by expansion range of Cutter Blades from 4" to 36".
(10) Pilot Bit—Centers Scraper and steadies cutting action.

A FEW IMPORTANT WALL SCRAPER APPLICATIONS

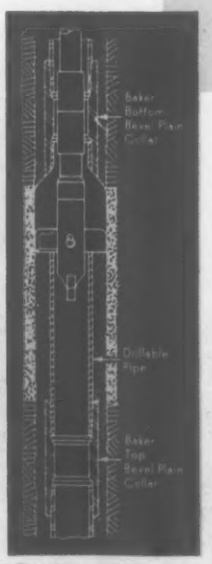


A typical Gravel Packing job, showing hole enlargement performed with Baker Wall Scraper.

Showing application of the Baker Wall Scraper for removing the mud sheath from the face of the formation.



A bottlenecking job done with a Baker Wall Scraper.



Cutting out sections of drillable pipe with Wall Scraper.

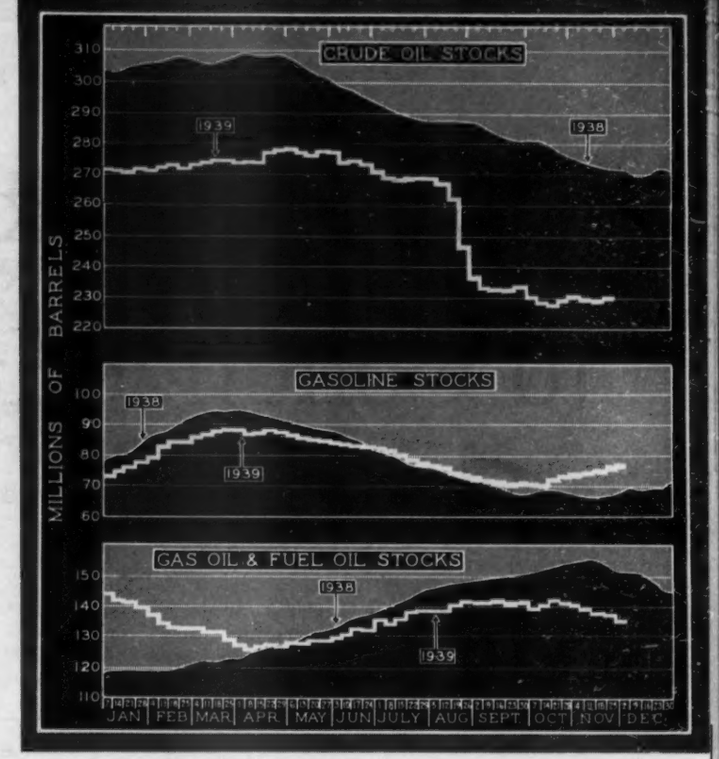
TWO TOOLS IN ONE

This device is really "two tools in one" since by merely substituting Sampler Blades for the regular Scraper Blades, the tool is converted into a Baker Rotary Wall Sampler—an exclusive Baker feature. With this device it is possible to take actual cores from the side walls of any uncased hole at any depth.

Showing Wall Sampler Blades taking cores from side walls.

Trends

Rapid Increase in Gasoline Inventory Factor in Markets



FURTHER weakness in all grades of gasoline at several refining centers, with no improvement in the problem of price-cutting in wholesale and retail markets, is bringing an insistent demand for a curtailment in plant operations over the next few months. The weekly A.P.I. reports since early fall have shown an unfavorable trend in the accumulation of gasoline stocks. Inventories are 10 per cent greater than a year ago, with seasonal accumulations certain to continue throughout the next 3½ months. The gains apply to all the principal refining areas with the greatest weakness at this time centering in the Gulf Coast, Mid-Continent and Middle West areas. Prices have decreased steadily in the past month.

CRUDE PRODUCTION *3,297,511 bbl. daily average—down 518,234 bbl. One year ago 3,215,519 bbl.*

CRUDE STOCKS *231,811,000 bbl. as of November 25 — up 1,976,000 bbl. One year ago 270,563,000 bbl.*

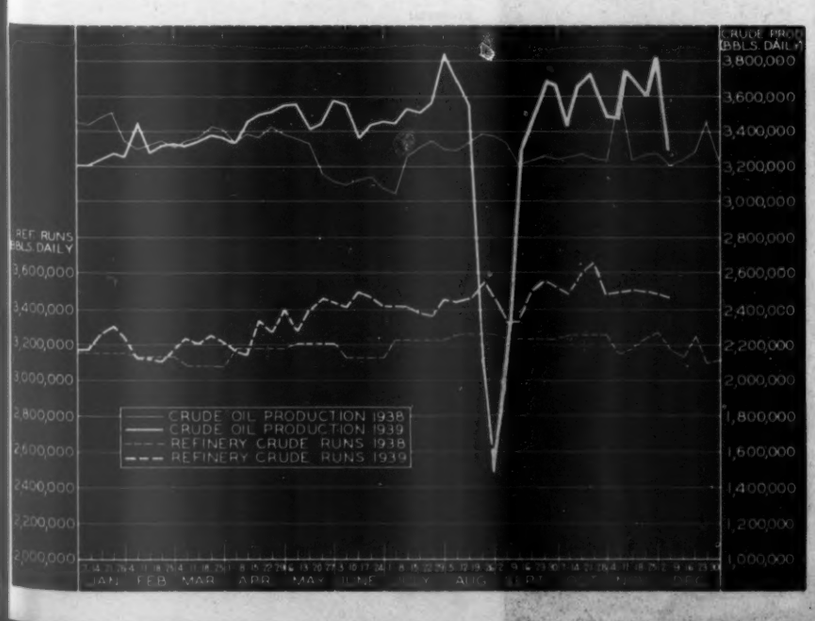
GASOLINE STOCKS *76,365,000 bbl. as of December 2—up 770,000 bbl. One year ago 69,673,000 bbl.*

GAS AND FUEL-OIL STOCKS *135,962,000 bbl. as of December 2—down 2,102,000 bbl. One year ago 151,617,000 bbl.*

REFINERY RUNS *3,480,000 bbl. daily week ended December 2 — down 30,000 bbl. One year ago 3,160,000 bbl.*

While gasoline exports have decreased since the start of the war, the domestic demand is running at least 5 per cent ahead of last year's, so the trouble does not arise from an unsatisfactory total demand. The reason generally offered is that refiners are compelled to operate their plants at summer capacity to take care of demands for other products which are running 10 to 20 per cent ahead of last year's in refining areas east of California. The higher prices received for these products are not offsetting the losses in the case of gasoline, so the refinery operating position is getting worse instead of better. Market students explain that the solution lies in reduced runs to stills over the next 3 or 4 months. They agree that the gasoline situation, and not that of other products, should be the controlling guide in determining the levels of the industry's manufacturing operations.

One operator summarizes the situation stating: "I can't understand why a refiner runs his plant with crude costing 3 cents a gallon to supply fuel oil bringing 1½ cents per gallon and at the same time overproduces his money product—gasoline—which should be bringing at least 6 cents a gallon."


CRUDE PROD. (BBLS. DAILY)
REF. RUNS (BBLS. DAILY)
CRUDE OIL PRODUCTION 1938
CRUDE OIL PRODUCTION 1939
REFINERY CRUDE RUNS 1938
REFINERY CRUDE RUNS 1939
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC

DAILY AVERAGE PRODUCTION FOR WEEK

	Dec. 2, 1939	Bur. Mines Dec. est. of demand	Dec. state allowables	Nov. 25, 1939
Oklahoma City	89,950	.....	.....	105,900
Seminole fields	39,600	.....	.....	38,775
Remainder of state	293,950	.....	.....	282,550
Total Oklahoma	423,500	437,600	437,600	427,225
East Texas	299,005	.....	.....	495,595
West Texas	184,947	.....	.....	262,137
North Central Texas	98,786	.....	.....	130,493
Texas Panhandle	61,158	.....	.....	82,000
East Central Texas	79,356	.....	.....	95,259
Gulf Coast Texas	274,088	.....	.....	385,989
Southwest Texas	63,099	.....	.....	101,156
Total Texas	1,060,439	1,438,100	1,402,673	1,552,629
North Louisiana	69,645	.....	.....	68,830
Gulf Coast Louisiana	202,548	.....	.....	202,698
Total Louisiana	272,193	255,200	255,200	271,528
California	592,250	594,500	599,000	613,850
Kansas	177,250	168,000	170,600	184,850
Arkansas	70,235	56,100	69,442	67,290
Eastern fields	102,200	104,600	.....	102,850
Illinois	332,245	315,200	.....	332,175
Michigan	65,149	61,000	.....	64,638
New Mexico	113,070	110,000	111,000	113,080
Rocky Mountain area	88,980	79,400	.....	85,630
Total United States	3,297,511	3,619,700	.....	3,815,745

In contrast to the trend in the rest of the industry, Pennsylvania producers received another 10-cent-per-barrel advance in their product. Pennsylvania Grade crude and lubricants are now approaching their 1936-1937 highs, a condition brought about by a strong demand for the lubricants in recent months.

Tanker rates continue to increase for both coastwise and export movement. These increases and the fact that there are not enough tankers to take care of needs regardless of rates, is an important factor in weak refinery gasoline and natural-gasoline markets at the Gulf Coast and inland points of the Southwest.

Pipe-Line Expansion Program to Continue Into 1940

By PAUL REED

NEW construction work brings the major pipe-line year of 1939 to a close, in what is normally an off season, with an unusual number of important projects to be completed in winter months which will start 1940 as a very active period. Furthermore, several large undertakings now being considered indicate that the industry will continue its extensive pipe-line expansion for an indefinite period.

In reviewing projects recently done, before discussing new work, it is seen that this fall eight large projects have been completed. On November 26 the first oil was received at the Utah Oil Refining Co.'s Salt Lake City refinery through the 442-mile line from Fort Laramie, Wyo., which is operated under exceptional conditions of pressure, altitude, and climate due to the mountainous area in which it is laid. In construction programs to improve crude-oil transportation facilities for the Illinois basin, Texas-Empire Pipe Line Co. has completed an 80-mile line from Salem to Heyworth and Sohio Pipe Line Co. has completed a 90-mile line from Salem to Stoy.

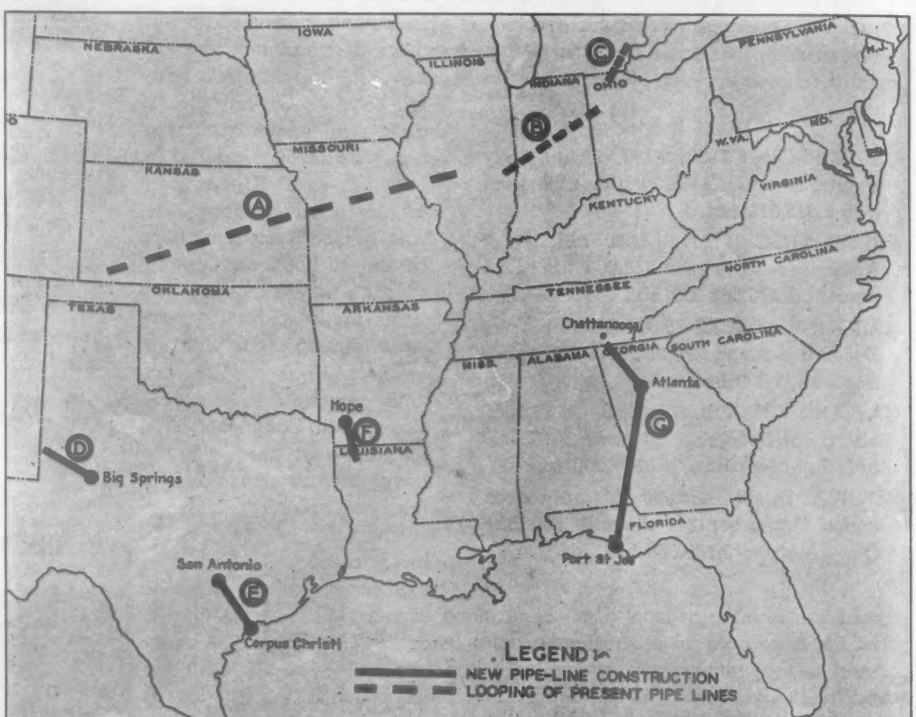
Four Gasoline Projects

Provision has been made for economical movement of gasoline by four important projects: Standard Oil Co. (Indiana) line from the Sugar Creek refinery near Kansas City to Council Bluffs, Iowa; Magnolia Pipe Line Co.'s line was built from Kilgore to Beaumont, Tex.; Iliana Pipe Line (built for Phillips Petroleum Co.) was laid from Dupo to East Chicago, Ind.; and Cimarron Valley Pipe Line Co. (Champlin Refining Co.) line from Superior, Neb., to Sioux City, Iowa, is now nearing completion. Northern Natural Gas Co. has completed a line from Sioux City, Iowa, to Minneapolis, Minn.

In the projects just mentioned there is a total of 612 miles of crude-oil lines, 1,005 miles of gasoline lines and 250 miles of natural-gas lines. These figures total 1,867 miles and do not include numerous lines of less than 100 miles in length, which altogether represent a substantial aggregate investment.

Conspicuous in the construction programs now under way or soon to be commenced are two new gasoline lines and the looping of two major systems—a crude-oil trunk line and a natural-gas transmission line. These, together with other major current pipe-line work, represent a construction of somewhat more than 1,000 miles of line.

The longest pipe line to be contracted by one construction organization in recent years is the 450-mile gasoline line of the Southeastern Pipe Line Co. (Gulf and Pure interests) which will be built from Port St. Joe, Fla., to Atlanta, Ga., as well as to a point on the Tennessee line near



The map above indicates the major new construction projects:

(A) Panhandle Eastern Pipe Line Co. loops 140 miles.

(B) Illinois Pipe Line Co. loops 76 miles.

(C) Transit and Storage Co. loops 67½ miles.

(D) Basin Pipe Line Co. will build 93-mile line.

(E) Magnolia Pipe Line Co. builds 158-mile line.

(F) Louisiana-Nevada Transit Co. will build 92-mile line.

(G) Southeastern Pipe Line Co. will build 450-mile line.

Left: Some unusual construction projects were encountered in building during the year. Here is a view of a crew carrying a section across a canyon

Chattanooga. Williams Brothers Corp. will build this as a turnkey job, making the survey and buying right-of-way in addition to laying the entire line. It is expected that work will start after the holidays. Four pumping stations and 10 bulk stations are to be built. The project will cost about $6,000,000. Gasoline is to come by tankers from the Gulf's refinery at Port Arthur and the Pure's at Smiths Bluff. The line will serve the marketing facilities of both Gulf and Pure in Florida, Georgia, and Alabama.

Contracts have been awarded this week to two contractors for the construction of 140 miles of 24-in. and 22-in. loops on the part of Panhandle Eastern Pipe Line Co.'s system between Liberal, Kans., and Springfield, Ill. Contracts were let as follows: Four loops west of Louisburg, Kans., to T. R. Jones; five eastern loops to I. C. Little. Contractors have until July 1940 to complete the work in this line.

This work is being done in connection with a program of the company which will entail the expenditure of $3,500,000. In addition to looping, new compressor-station equipment is to be installed, the capacity of the company's combination gasoline and dehydration plant at Liberal, Kans., is to be increased. Looping Illinois Pipe Line Co.'s system with six loops totaling 76 miles, in Illinois, Indiana, and Ohio, is now being done by Sheehan Pipe Line Construction Co., which is also looping Transit & Storage Co.'s line where four loops, totaling 67½ miles, are now in process of construction between Cygnet, Ohio, and Richmond, Mich.

Two hundred and fifty miles of natural-gas lines saw completion in 1939. In the view above is seen construction work on a 22-in. natural-gas line now operating

Several large undertakings now being considered point to a continuation of pipe-line expansion for an indefinite period. At right is a view of a machine-wrapping operation

Natural-Gas Line in Operation

Early this week United Gas Pipe Line Co. placed in operation 125 miles of 18-in. natural-gas line recently laid between Monroe, La., and Jackson, Miss. Construction has been handled by Brown & Root, Inc. This project is part of a program which calls for the laying of a total of more than 175 miles of gas line. The Monroe-Jackson trunk line was laid to supply additional gas for the company's present Jackson-Pensacola-Mobile system serving parts of southeastern Louisiana, southern Mississippi, and southern Alabama and Florida. The line was laid in three-joint welded sections with a coupling between each section. This makes a ratio of two welds to one coupling. Pipe is 47.39-lb. seamless with ¼-in. wall thickness. Normal capacity will be 100,000,000 cu. ft. of gas daily. The project includes a 2,000-hp. compressor station at Jackson. It makes use of a 4,000-hp. station at Monroe which has been in operation previously. Operating pressures are not to exceed 500 lb.

Canadian River Gas Co. is expanding facilities by installing four 600-hp. compressors at the Dalhart, Tex., station. These will increase the daily throughput at that point by 100,000,000 cu. ft. At the company's Canyon City, Colo., station one 600-hp. compressor is installed with capacity of 13,300,000 cu. ft. There has been considerable expansion of gas pipe-line facilities in Michigan in a number of projects.

An interesting type of project is the one undertaken by the recently organized Louisiana-Nevada Transit Corp. for the purpose of supplying gas to the Arkansas Portland Cement Co. at Okay, Ark., located in the vicinity of Hope, Ark. This is a case where a deal has been made by combining the interests of producer, contractor, and consumer. The company is headed by W. A. (Gus) Delaney, Jr., Ada, Okla., and Thomas R. Jones, Dallas, Tex. The Boettcher interests of Colorado operating the cement plant have substantial holdings in the company. Gas will come from Oliphant Oil Corp. properties in the Cotton Valley field, Louisiana; the line will be laid by T. R. Jones Construction Co. Since pressure in the field is 3,800 lb. no compressor stations will be necessary. W. Mike Murphy, formerly with Air Reduction Sales Co., is to be superintendent of the line. Electric-welded line pipe in the following o.d. sizes and weights will be used: 80 miles, 8⅝-in., 18.25 lb.; 10 miles, 6⅝-in., 11.65 lb.; 4 miles, 4½-in., 8.63 lb. Pipe is now moving by barge via the Ohio, Mississippi, and Ouachita rivers to Camden, Ark., whence it will be shipped by truck to the right-of-way. The line will be electric-welded. The contractors will use two spreads which will lay the pipe by the stovepiping method. The line will be built for 1,000-lb. work pressure. Right-of-way is now being bought and cleared. It is expected that work will start about the middle of this month.

Revamping System

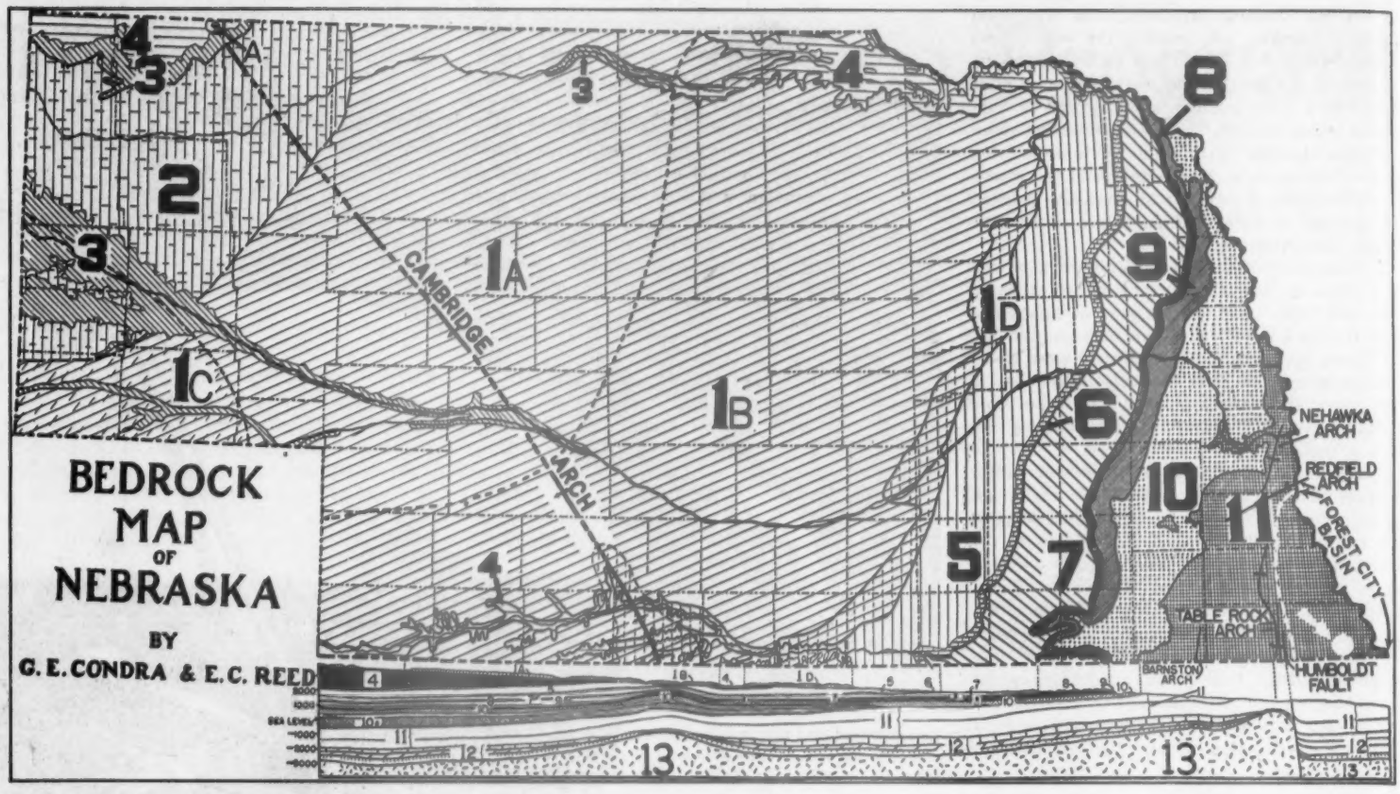
Last week Texas-New Mexico Pipe Line Co. awarded a contract to W. G. Hanrahan for the laying of 125 miles of 4, 6, and 8-in. field lines in the vicinity of the Eunice and Monument areas. The contract also provides for taking up 45 miles of line. This work is being done in connection with revamping the company's system to make it possible to operate with gravity flow for a long distance through the trunk line. Earlier in the fall this contractor laid over 50 miles of 14-in. and 12 miles of 8, 10, and 12-in. line for this project, which has been in the construction stage for more than a year.

Basin Pipe Line Co. has been organized by Cosden Petroleum Corp. interests for the purpose of constructing and operating a 93-mile 6-in. line from the Wasson-Denver field of Gaines and Yoakum counties, Texas, to the company's refinery at Big Spring, Tex.

Magnolia Petroleum Co. has let contracts to Williams Brothers Corp. and to Sheehan Pipe Line Construction Co. for a gasoline pipe-line extending from Corpus Christi to San Antonio, Tex., a total distance of 158 miles.

Contemplated Construction

Plans are being made for several projects which will be under way in 1940 for which definite announcements have not yet been made. Socony-Vacuum Oil Co. has been planning construction of a gasoline line from Hartford, Conn., to Springfield, Mass. This company completed a 357-mile line this summer from the Illinois fields to East St. Louis and Lima, Ohio; from this latter point oil is forwarded to the company's refineries at Trenton, Mich., and Buffalo, N. Y. Consideration has recently been given to the construction of extensions either to the Great Lakes or eastward. Shell Pipe Line Corp. is preparing to change the crude-oil line between Wood River, Ill., and East Chicago, Ind., from a crude-oil line to a gasoline line. This change is scheduled for 1940. In the vicinity of the K.M.A. field in Texas a congested situation exists which has led to consideration of plans for looping lines serving that area. The Kansas Gas & Pipe Line Co. project for building a line from the Hugoton gas field in southwestern Kansas to the iron ranges of Minnesota has been postponed this year because of delays incident to obtaining authorization from government boards.



Nebraska Activity Increases

By DAL DALRYMPLE

LINCOLN, Neb., Dec. 4.—The excitement following discovery of oil near Falls City, Richardson County, in extreme southeastern Nebraska, has subsided considerably and operators who are active in the area are going ahead with plans for the conservative development and further exploration of that sector of the Forest City basin.

Several additional wells in the Richardson County field may be started within the next few weeks, but a drilling spree of Mid-Continent proportions is not anticipated before the spring of 1940—Nebraska's winters not being conducive to more than necessary outdoor activity. However, if the second Falls City wildcat, due to be completed about the middle of January, is a producer it may cause the enthusiastic to brave subzero temperatures and plunge boldly into a drilling campaign.

The discovery well, Pawnee Royalty Co.'s No. 1 Boice, C NE NE Section 18-1n-16e, about 2½ miles west of Falls City, is being produced daily as operators seek the $15,000 bonus for the first oil well to be completed in Nebraska. In order to win the bonus, it must produce a minimum of 50 bbl. daily for 60 consecutive days. At the end of the first 13 days of the official test the well had produced 785 bbl. of oil, operators pumping only 6 hours a day and holding daily yield to 60 or 65 bbl. Two state observers, appointed by John Ainley, director of state Motor Fuel Inspection Division, are at the well continuously during the test, which terminates January 19. Production is from Hunton lime at 2,276-87 ft., total depth. It flowed an average of 15 bbl. of oil daily while pumping equipment was being installed, with no gas or water. Gravity of the oil is 32.4°, corrected. When the state test is completed, operators may cement casing and acidize in an effort to increase production. Elevation of No. 1 Boice is 903 ft.

Left, below: The men responsible for the Falls City discovery are A. L. Ladner, Houston, Tex., geologist, who said oil was there; W. A. Guinn, Odessa, Tex., one of the two brothers owning the Pawnee Royalty Co., and Harry Harper, Odessa, drilling contractor. Right, below: State representatives observing the day-by-day pumping tests as operators seek the $15,000 bonus for first Nebraska producer are James Knaidl, W. J. Wensl, observers, and John Ainley, director of the state Motor Fuel Inspection Division

The oil is being trucked to the recently completed refinery of Searle Petroleum Co. at Omaha, which pays 94 cents a barrel for it. The plant has capacity of 100 bbl. daily, but it is expected to be enlarged later. If production at the Falls City pool is holding up in the spring, the Searle company plans to transport the crude to Omaha on Missouri River barges. Omaha marketers have agreed to take the entire gasoline output of the refinery.

The Pawnee Royalty Co. is drilling the second well on its 60,000-acre Richardson County block at No. 1 Meyers, C NW NW Section 24-1n-15e, about 1¾ miles southwest of the discovery. The cable tool rig used at No. 1 Boice was moved to the sec-

ond location by Ferndale Drilling Co., contractor on both wildcats. Elevation is 936 ft. Crews, working 24 hours daily, are expected to complete the well by January 15.

To Test Hunton

Hunton lime will be thoroughly tested at No. 1 Meyers, top of that formation being expected at around 2,315 ft. Eight-inch casing will be set on top of the Hunton, enabling operators to go deeper if desired. The Hunton pay section has not been thoroughly explored at No. 1 Boice, operators deciding against taking chances incident to such a test, preferring to complete it as a small producer just a few feet in top of the pay.

The third well in the area is being drilled at Uhri & Stephens' No. 1 Stauffer, SW SW NE Section 22-1n-13e, about 15 miles west of the Boice well. Surface casing was set at 60 ft. and the crew was drilling ahead. It is in the extreme part of southwestern Richardson County and, according to the operators, is 1⅛ miles east of the Humboldt fault, along the Nemaha ridge. It is being drilled with cable tools. Arbuckle lime is the goal unless production is found higher up. The operators have a lease block of about 6,000 acres. This is the fourth well to be drilled in Richardson County by these operators, the first three being failures although two of them had showings of oil. Location is about 5 miles southwest of Arab Petroleum Co., Robert Garland and others' No. 1 Ogle, SE SE Section 9-1n-14e, a wildcat of 1937 completed at around 3,500 ft. in Wilcox sand. It had a showing of oil in Viola lime at 3,022 ft. Attempts to plug back and acidize the lime failed. Some observers believe the test could have been made a producer had the hole been properly cased and the lime acidized; others did not think the showing sufficient to produce.

Several drilling deals for additional tests in Richardson County are in the formative stage and locations may be announced soon. Leasing activity, which spurted following news of the Boice strike and extended into counties bordering on Richardson, has declined somewhat. Some landowners have hiked their prices, buyers are holding out for lower prices and little acreage is changing hands as a result. This condition is due to be corrected, however, as prices level off. Several of the deals reported in the making are on small blocks and reasonably close to the discovery well.

Geophysical Work

Seismograph exploration was revived in southeastern Nebraska by the discovery of oil. Crews of two major companies are working out of Falls City, while a crew of an independent geophysical company is working out of Auburn in Nemaha County, immediately north of Richardson County. Seismograph exploration also was reported to have been started near Hastings, in the Central Nebraska basin, and elsewhere in the state.

Two pipe-line companies were reported to have made preliminary surveys for lines to the Falls City area. Should sufficient production be developed at Falls City to justify construction of pipe lines, it was believed a line would be laid to the Missouri River, about 10 miles eastward, where barge service to Kansas City, Omaha, or St. Joseph might be utilized. A line may also be constructed from Falls City to connect with the Stanolind line from Salt Creek, Wyo., to Freeman, Mo.

Representatives of supply companies, manufacturers and distributors of oil-field equipment have been numerous in Falls City, as well as other nearby Forest City basin towns, looking for possible locations for branch houses.

All of this as the result of the completion of one small producing well. If the second well being drilled by the Pawnee Royalty Co. is a producer, it will prove productive an area from 3½ to 4 miles long, and then, observers say, an intensive drilling campaign will follow. Activity will receive additional impetus if the Uhri & Stephens well is productive. Should either or both of those tests be dry, however, exploration by the drill will not be retarded to any great extent.

The discovery of oil at Falls City is particularly pleasing to Dr. G. E. Condra, dean and director of the University of Nebraska's Conservation and Surety Division and state geologist for the last 21 years. Many years ago he predicted oil would be found in Nebraska, his belief being based on intensive field, laboratory and office studies of the geology of Nebraska. His field work in tracing Nebraska formations led him into neighboring states, across Kansas and into Oklahoma.

"On the basis of this work," he said, "I theorized in 1914 that if the formations underlying the producing oil wells of Kansas and Oklahoma extended beneath Nebraska, there was no reason why there should not be oil in Nebraska." He identified and named more than 100 Nebraska rock formations, correlated them with other areas, wrote papers, edited bulletins and reports, prepared maps and cross-sections, told many geological societies of his findings. He once outlined oil possibilities of Richardson County to 100 geologists of Nebraska, Kansas, and Missouri, in session at Falls City. But he was not a promoter. He did not plead with the oil men to come to Nebraska. He presented the facts, reports on outcroppings in nearby oil states, samples and statistics from deep wells in Nebraska, with the formula that "These are the facts. Oil is your business, not mine."

Since his predictions have been borne out by the finding of oil in Nebraska, his offices in the Geological Survey here at the university have become a Mecca for geologists and other men seeking information regarding the oil possibilities of the state. Dr. Condra, Eugene Reed, assistant state

(Continued on Page 28)

Upper left, tanks into which oil from Nebraska's first well is pumped; below, the discovery well, rig now being used at a second test; upper right, R. R. Benson, Skelly Oil Co. representative, taking samples of Nebraska's first crude for laboratory tests

SPARKS . . . FROM THE NEWS

BACKYARD BONANZA: This descriptive title is given to an article in a popular magazine describing the Clay County region in Tennessee. The field is described as the last of the "poor man's oil fields." Operators in other fields may claim the title belongs to them.

LONG-TIME ACTIVITY: Regardless of what happens in the Tinsley area, Mississippi is now assured of an exploratory period over a wide front which will last at least 3 years. Incidentally, the geological work now under way is overlapping into eastern Alabama.

PROLIFIC: Reworking of old wells is proving profitable in Oklahoma, two exhausted producers in the St. Louis field being deepened the past week to yield more than 2,000 bbl. each, daily, while an exhausted deep producer in Stephens County was plugged back to open a new pay zone.

DISAPPOINTING: More or less expected but nonetheless disappointing to victims of Mexico's expropriation was the Mexican Supreme Court's verdict upholding the government's action. Meanwhile, Mexico's consistent fumbling is threatening to bring on serious labor trouble.

DISCOVERY: Lack of market has not greatly retarded wildcat exploration in Kansas, more than 30 new pools already having been opened in that state this year.

FROM THE NORTH: Opponents of the Cole bill got support from an unexpected source. The Montana Oil Conservation Board in a brief but thorough analysis turned thumbs down on it.

PERPLEXITY: Gulf Coast refiners are burdened with gasoline that East Coast buyers want, but tankers are scarce and charter rates are climbing.

FRYING PAN TO FIRE: Some refiners who have stepped up operations to profit by the demand for heating oils find themselves with accumulations of gasoline that nobody wants except at unprofitable prices.

NO BENEFITS: It didn't take the stripper-well owners at their Tulsa annual meeting very long to take a firm stand against the Cole bill. Producers of the industry's most costly crude can see no benefits from federal control.

SPREADING: Activity in Nebraska is spreading as a result of the discovery of oil in the Forest City basin, with the Central Nebraska and Julesberg basins and Cambridge Arch country receiving increased attention from the oil men.

CONCENTRATED POWER: An airplane manufacturer is now assembling a single gasoline engine capable of producing 3,700 hp. The fuel consumption and power output of this engine will be equal to those of nine ordinary drilling rigs and it could drill six 15,000-ft. tests at one time.

WINTER CAMPAIGN: Winter apparently will not stop the most active pipe-line year in a decade. New projects are announced weekly, with more under consideration.

HOT AGAIN: Conservation control by state action blows hot and cold in Illinois, depending on matters which have nothing to do with oil. Right now it is hot again.

IOWA HAS GREAT HOPES . . .

Christened with oil from its neighboring State of Nebraska's discovery well, Phillips Petroleum Co.'s No. 1 Creston, near Creston, Iowa, was spudded on the sixty-sixth birthday of Frank Phillips, chairman of the company's board. A large crowd of enthusiastic and hopeful citizens of Creston witnessed the appropriate ceremony that was staged in connection with the spudding

The Possibility of Further Oil Discovery in Mississippi

By H. M. MORSE
Supervisor State Oil and Gas Board, Jackson, Miss.

As a result of discovery of the first commercial oil production in Mississippi, the state's greatest leasing and exploration campaign is now under way. With accelerated interest in the state, much valuable geologic information is coming to light.

The presence of subsurface structures is being thoroughly explored by 50 geophysical parties working throughout Mississippi. These data, combined with geologic knowledge gained from deep wildcats drilled in the state, are contributing to a clearer conception of the state's geology, with a resulting improvement in the expectancy of further oil discovery in future wildcatting.

Recent knowledge has permitted a revision of the possible producing areas. In Fig. 1 the general outlines of these sections are plotted. These divisions merely indicate the possible formations in which oil or gas production may be found, without eliminating the chances of production in older or younger formations.

The Upper Cretaceous basin, while continuous, is roughly divided into a northern section including the northwest counties of the state, and a southern area which extends in a northwest-southeast direction through the central part of Mississippi. This latter, or southern, Upper Cretaceous basin is at present the most actively exploited part of the state from the standpoint of leasing, wildcatting and geophysical prospecting.

Possibilities of Upper Formations

The Cretaceous period is believed to be the only epoch of the Mesozoic era represented in deposits in Mississippi, although the presence of productive formations of Permian age is indicated in a small area on the western border of the state surrounding Vicksburg. Of the Cretaceous, the upper formations show the greatest possibilities for production in the central part of Mississippi.

The unconformity between the Cretaceous period and those of Paleozoic age is shown by the fact that the Tuscaloosa formation, which lies at the base of the Cretaceous, immediately overlies hard Paleozoic deposits. Erosion of early Mesozoic deposits was halted at the beginning of the Cretaceous period, and the old land surface received deposits of the Tuscaloosa immediately upon the eroded Paleozoic formations.

The Tuscaloosa formation represents possible oil production, particularly in the southern Upper Cretaceous basin. The beds of this formation consist of dark brown, gray, and lignitic clays and thinly bedded lignite in the lower sections. These beds gradually become more sandy in the upper sections. Apparently fresh water deposits, the Tuscaloosa beds show nonuniform, lenticular and often crossbedded characteristics in the sand, lime, and lignite deposits, and oil accumulation on structures may be limited by extent of the sands in addition to the area of the structures by such depositional characteristics.

The Woodbine (Eagleford) sands of Louisiana and Texas should also be found in Mississippi in the Tuscaloosa, which sands should be continuous.

Eutaw Formation

Gradual transition of the Tuscaloosa formation into the Eutaw is marked by greater micaceous sand deposition, with occasional clay beds. Above the lower Eutaw, which is similar to the Tuscaloosa in that beds are discontinuous, deposits become increasingly more glauconitic and calcareous with an abundance of fossil remains.

The Eutaw formation was proven productive recently in the Tinsley field of Yazoo County, showing a good oil-saturated section in Union Producing Co.'s No. 1 Stevens. The lenticular nature of sands in this section is clearly illustrated in Tinsley by the fact that the productive Eutaw sand is already defined by failure in two tests drilled less than 1 mile distant to the southeast and southwest. However, the Eutaw formation, characterized by many sands, although nonuniform and limited, stands as one of the most promising formations for possible production, and it may be expected that wildcats drilled in the central part of the state will drill at least to this formation, encountered at —4,640 ft. subsea at Tinsley.

The Blossom sand is known as the producing sand in the Eutaw in Louisiana.

The upper Eutaw, calcareous in nature, grades rapidly into the overlying Selma chalk, which corresponds to the Annona chalk to the west in Louisiana and Arkansas. This marine lime deposit carries many sand sections, in one of which oil production was discovered at Tinsley. The sand is producing in four wells at present, although limited on the north and west at this stage of the field's development.

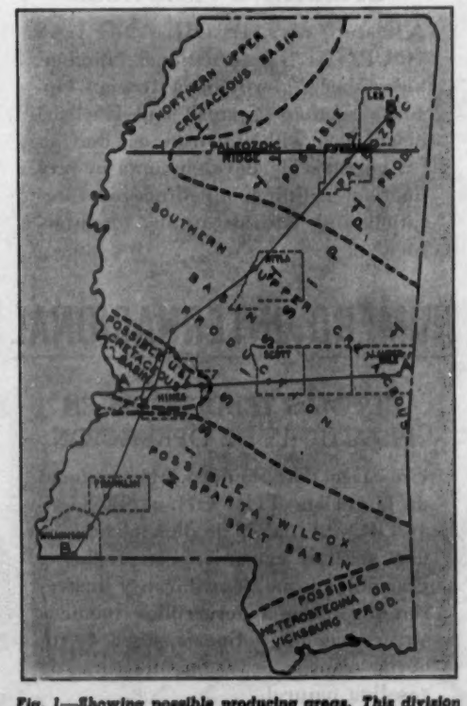


Fig. 1—Showing possible producing areas. This division does not preclude shallower or deeper production

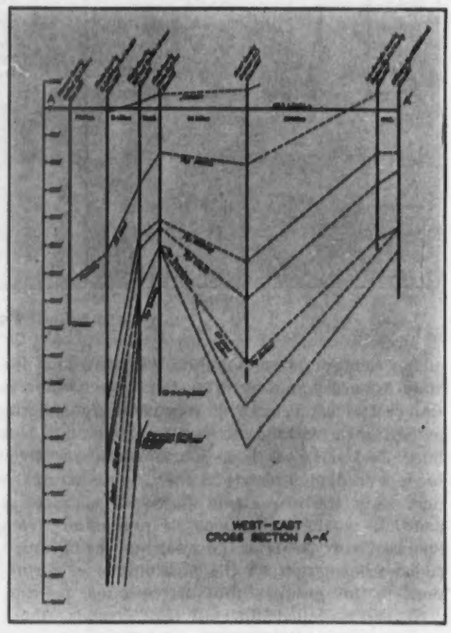


Figure 2

The thickness of the Selma is estimated in excess of 1,000 ft. in the southern part of the state, thinning considerably to the north. Despite this thinning it outcrops more extensively than any other Cretaceous formation in the Black Prairie section of northeastern Mississippi, where it shows fairly constant characteristics. It is very sandy at its base, becoming more and more calcareous in its upper sections, until the sands disappear. The sandy sections near the base of the Selma comprise another extensive formation in which oil or gas production may be anticipated in central Mississippi. The steep dip of all Cretaceous formations to the south and west precludes its being reached by the drill in southern counties.

Overlying the Selma chalk is the Ripley formation, consisting of varying deposits of sand, lime, and glauconitic sands and marls. This formation marks the close of Cretaceous deposition and the upper limits of the Mesozoic age.

Sparta-Wilcox Trend

The Sparta-Wilcox trend, widely publicized as a possible productive area extending from the recently successful drilling in Central Louisiana, embraces a large section of southern Mississippi narrowing to the east between the areas of pos-

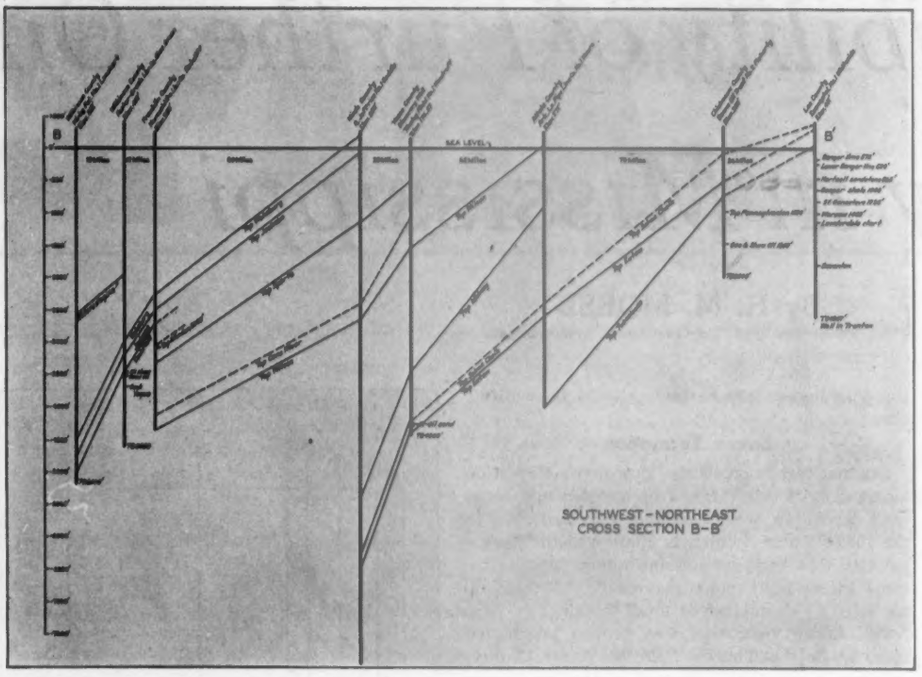


Figure 3

sible Cretaceous production on the north and possible Heterostegina or Vicksburg production in the coastal counties. The Wilcox group and the overlying formations of the Heterostegina, Vicksburg, Jackson, Cockfield, Sparta, and Cane River have been drilled less than the Cretaceous to the north, but the increase in state-wide activity, in addition to the indications of production from Sparta-Wilcox fields to the west may bring much added information on the possibilities of formations in this group within the next few months.

In the so-called Sparta-Wilcox trends, there have been more blocks leased up due to the possible salt domes and other types of structures in this area.

Paleozoic Possibilities

Reverting to the oldest formations encountered in the state, attention is drawn to the northeast sector, where the westward extension of the Northwest Alabama basin is currently receiving considerable play. This feature is not a true basin, but a trough, plunging steeply to the southwest. The extent and continuity of these Paleozoic formations indicate a large area of catchment. Their outcrops in Alabama show oil and gas seeps, and the greatest indication of oil is the commercial asphalt deposition in the upper Mississippian Hartselle sand. This surface asphalt, in lime and sand, extends for 75 miles in an east-west direction south of the Tennessee River, and averages 10 to 12 miles in width. Indicating considerable oil migration up the Mississippian, it supports the expectation of finding oil reservoirs trapped in structures down dip.

Further information regarding possibilities of Paleozoic production is available from records of a government core test drilled in Section 25-10-14, Marion County, Alabama. Encountering Pennsylvanian formations to 545 ft., the test cored the Bangor lime, with oil shows to 1,146 ft., and the Hartselle sand was found at 1,386-1,493 ft. consisting of sand and lime with oil and gas shows. In the underlying Tuscumbia lime further oil shows were reported. The Devonian was topped at 1,862 ft., consisting mostly of black shales, lime, and chert, and the underlying formations of Silurian age were green and purple shales. The test reached the Ordovician, bottomed in Trenton lime at 2,392 ft. These shows, particularly in the Mississippian, indicate a good possibility of finding commercial oil where structures down dip have formed traps preventing the migration of oil to the surface in the asphalt field to the northeast.

The oil shows in Paleozoic formations has been checked by a currently drilling wildcat in Section 7-10-10, Itawamba County, Mississippi. This test encountered an oil show in lime of Mississippian age at 560-570 ft., and recently showed a fine-grained sand containing asphaltic oil at 1,150 ft., probably lower Mississippian in age.

Subsurface Sections

Two sections through Mississippi are shown in Figs. 2 and 3. The west-east section (Fig. 2) extends from the vicinity of Vicksburg due east into Lauderdale County, showing the dips of the formations in the Upper Cretaceous, and the presence of what is believed to be Permian lime in Hinds County.

Fig. 3, extending from Wilkinson County in the southwest corner of the state, diagonally northeast through Hinds County and the Tinsley field to Lee County, indicates the dip of all formations, from the Heterostegina through the Sparta-Wilcox groups, the Upper Cretaceous and unconformably into the Paleozoic deposits. Sections of the last era are shown in the tests drilled in Chickasaw and Lee counties. The plans of these two sections are shown in Fig. 1 as Section *A-A'* and Section *B-B'*. Deeper drilling in the past several months has made this clearer conception of the subsurface of Mississippi possible.

Summarizing, the Upper Cretaceous shows possibilities for oil and gas production through the greatest section of Mississippi, including the northwest and central parts of the state. The added possibility of Lower Cretaceous and Permian production is indicated in West Central Mississippi, and Sparta-Wilcox through the southern part of the state and Heterostegina or Vicksburg in the coastal section roughly outline the possibilities for production to the south. The steeply dipping beds of Paleozoic age in the northeast section of Mississippi constitute a further prospect for oil discovery.

Increased wildcatting, as a result of the present leasing and exploration, will clarify much of the information which is at present only indicated. The production possibilities in the Upper Cretaceous which provides the state's first commercial oil, will be in all probability most widely exploited in the next several months.

INTERNATIONAL NUMBER

LATEST TRENDS IN OPERATING PRACTICES

A feature of THE OIL AND GAS JOURNAL'S International Number, December 28, will be a foreign language section (Spanish and English) discussing, with illustrations, the latest engineering developments in production, refining, pipe-line transportation, and natural gasoline manufacture.

NUMERO INTERNACIONAL

ULTIMAS TENDENCIAS EN PRACTICAS DE OPERACION

Un rasgo del Numero Internacional de la revista THE OIL AND GAS JOURNAL del 28 de diciembre, sera una seccion extranjera en Ingles y Español, en que describiran y ilustraran los ultimos desarrollos tecnicos en producción, refineria, linea de tubería transporte y manufactura de gasolina natural.

Cole Committee Hearing At New Orleans Dec. 11

WASHINGTON, D. C.—The Cole subcommittee has decided to begin its New Orleans hearings on pending oil legislation December 11 instead of December 13. Chairman Cole said the date was changed to permit some witnesses to attend a meeting of the Interstate Oil Compact Commission December 14 at Wachita, Kans. The compact meeting has since been postponed.

The committee will assemble in Mattoon, Ill., December 8, going from there to New Orleans. Any investigation in Texas or Louisiana fields will be deferred until the New Orleans hearing ends. The committee and staff will arrive in New Orleans Sunday evening, December 10.

Previously Col. E. O. Thompson, with Chairman Lon A. Smith of the Texas commission, had opposed a regional meeting and suggested instead that the congressional committee conduct its hearing in Washington when Congress is in session.

In a letter to Colonel Thompson, Mr. Cole explained it was the desire of the committee to have the states' side put into the record next month so it would be printed along with the federal Government's testimony.

Texas Co. to Appeal From N.L.R.B. Decision

HOUSTON, Tex.—Texas Co. has appealed to the U. S. Circuit Court of Appeals to set aside the November 18 ruling of the National Labor Relations Board, in which the company was ordered to withdraw recognition of an employes' union at its Port Neches refinery.

Opposition to Cole Bill Spreads

THE members of the Oil Conservation Board of the State of Montana, meeting at Cut Bank, declared themselves "unalterably opposed to the enactment of the Cole bill." The resolutions said:

"1. The concentration of power at Washington, D. C., to control and manage the production, storage, and transportation of petroleum, in an individual to be appointed by the president and designated 'the commissioner,' but to be clothed with complete dictatorial power, is not now justified by the conditions and practices generally prevailing in the petroleum-producing states, and we believe that at any time and under any circumstances the subordination of the sovereign powers of the states over their petroleum industries to federal authority such as proposed by the terms of said H.R. 7372 would be a hazardous experiment in government, more likely to weaken than to strengthen the nation by reason of destruction of long-established and efficient local-control measures and agencies, the substitution of remote authority and new methods of uncertain value, additional enforcement officials, increased taxes, conflicting and confusing regulations, and additional burdens generally that many operators and consumers could not endure.

"2. The allegations contained in the bill under the heading 'Findings and Declaration of Policy' (Sec. 2[a]) are not substantially true and correct as to a large majority of the petroleum-producing regions of the United States, and, on the contrary, there is no doubt that preventable physical waste of petroleum has been reduced to the minimum consistent with present engineering knowledge and perfection of mechanical appliances, except in a comparatively few isolated cases involving newly discovered pools where abnormal conditions prevailing are in process of adjustment and will, undoubtedly, be soon corrected without the intervention of the federal Government.

"3. The nation is not faced with any emergency in connection with the preservation of its petroleum resources whereby its national defense is, or will be, imperiled; and if it were, we contend that there is no reason for assuming or expecting that the system of federal-dictator control proposed would remove the danger or solve the problems of the petroleum producers. In the public-land states where the secretary of the interior has exercised unrestricted regulatory powers over petroleum prospecting and producing operations on great areas of public lands for nearly 20 years, such operations being entirely exempt from control by state authorities, the practices pertaining to well drilling, producing, and avoidance of waste prescribed by the secretary for operators and operations on the lands under his jurisdiction are generally identical with the practices prescribed by state laws and regulations for operators and operations subject to state authority. If the practices may be improved by ways and means known to the secretary, he need do nothing more than point the way to receive the cooperation and support of the operators and state authorities.

"4. The practices and methods pertaining to petroleum prospecting, production, and conservation of deposits generally approved and now prevailing throughout the country have been devised and adopted by men possessing the practical experience necessary to qualify them as leaders and teachers concerning such matters. Such men are scarce, they may be expected to resent arbitrary control from any source, and it is not likely that their services would be available to the federal dictator to be created. Progress in the discovery of new principles and improvement of mechanical appliances and operating practices has been rapid and gratifying under our long-established competitive system, especially during the last few years, and may reasonably be expected to continue if not balked or disturbed by the inauguration of a dictatorship system entirely alien to our general governmental system and under which the public could have no assurance that individual enterprise, initiative, and experiment might remain active or even be permitted to survive.

"5. The administrative, punitive, and jurisdictional sections of the bill, comprising nearly half of the 6,000 words it contains, are in general so violative of long-standing laws and judicial procedure intended to protect individuals against official tyranny and errors that it is difficult to see how the representatives of freedom-loving people could seriously consider approving them. Perhaps some of the most repugnant clauses were inserted with the view of being 'traded out' by supporters of the bill in the course of the expected and assured legislative battle and, if so, we hope and recommend that our lawmakers may not be deceived by such tactics and will promptly move to give this bill the defeat that it deserves."

RESOLUTION

At the annual membership meeting of the Oklahoma Stripper Well Association held in Tulsa, December 1, careful consideration was given to the proposed bill for federal control of oil.

A resolution was unanimously adopted declaring the bill "would tend further to centralize Government and remove the control of production and conservation of oil from local state officials to federal officials; that it does not provide for ratable taking of oil and provides no assurance of an adequate market to both the weak and strong producers; and does not carry any provision, looking to the continued production and preservation of stripper wells. If enacted, it can likely result in increased importation of oil and the withholding of production from the present producing fields."

The resolution approved the policies of Gov. Leon C. Phillips of Oklahoma, and protested the enactment of the Cole bill, or any other bill that places the development and production of oil under the arbitrary control of any federal bureau.

Governor Phillips Protests

Speaking before the Stripper Well Association in Tulsa, Gov. Leon C. Phillips of Oklahoma said:

"If ever the blight of federal control is imposed upon the oil industry, the independent operator and the stripper-well owners are doomed. Governmental red tape, long-range authority, governmental policies which he can neither influence nor control will destroy him.

"As governor of your state, I am deeply concerned with this threat of federal control. We must not permit the propaganda of future scarcity and the desires of bureaucrats to gain control of the industry and import foreign oil to prevent our present use of this resource which is so necessary to the present welfare of our people.

"The nation need have no fear of a shortage of oil or gas in any emergency. It is not necessary to have governmental control in order to secure adequate supply."

STATE CAPITALS

TEXAS

THE TEXAS RAILROAD COMMISSION last week granted production increases totaling 16,234 bbl. in 15 fields, either in the form of increased allowables or by exemptions to the shutdown days. The allowable increase, effective December 1, raised the estimated net daily average for the state to about 1,402,673 bbl. Thus, whereas the net allowable at the first of the month was expected to be about 51,000 bbl. under the Bureau of Mines estimated demand figure of 1,438,100 bbl. daily, the margin is now reduced to less than 35,000 bbl. Approximately two-thirds of the increased allowable will be purchased by Humble Oil & Refining Co. The company was listed as the buyer of 11,590 bbl. of the increases granted. Following are the fields granted increases and the amount involved, excluding shutdown days:

Perkins Co.'s No. 1 Bashara in Young County, exempt from further shutdowns because of water; T. G. Shaw's No. 1 Stroud in Stephens County, allowable increased to 100 bbl.; Amity field, gross allowable raised 77 bbl. to 500 bbl. daily; Webster field, raised 4,160 to 10,000 bbl. daily; East Piedmont, 460 bbl. to 750 bbl.; Raccoon Bend, 2,100 to 3,430 bbl.; Amelia, 2,900 to 4,740 bbl.; Fitzsimmons, from 3,550 to 4,335 bbl.; Sugarland, from 4,594 to 10,600 bbl.; Clear Lake, from 727 to 1,442 bbl.; Pois and Schulz, from 72 to 300 bbl.; Livingston, exempt from shutdown order; Blanchard, from 65 to 100 bbl.; Flour Bluff, from 4,942 to 7,140 bbl.; Aransas Pass, from 12,085 to 17,950 bbl.; Jennings Ranch, exempt from shutdowns to increase allowable from 720 to 1,008 bbl.; Plummer, exempt from shutdowns.

The commission denied petitions for allowable increases in the Joe's Lake field of Tyler County, Francitas in Jackson and Seymour field in Baylor County. It also set dates for hearing other pleas for allowable increases during the next 2 weeks.

AN ALLOWABLE INCREASE OF 2,000 BBL. daily for the Foster field of Ector County was sought by operators at a commission hearing held last week. Applicants were Amon G. Carter, Broderick & Calvert, York & Harper, M. K. B. Drilling Co. and Sloan & Zook. Testimony presented showed the average daily allowable to be 39 bbl. and a net allowable of 24 bbl. daily, or some 13 bbl. lower than other fields in the vicinity; that the increased allowable requested could be produced without physical waste; that there is no gas cap in the field, and neither is there an appreciable water drive.

A proposal by Sinclair Prairie Oil Co. and west-side operators to grant wells on the west side of the East Texas field higher allowables than those on the east side will also occupy much discussion. Advocates of the plan feel that such action would serve to compensate west-side operators for the oil they are losing to leases in the "fairway" and east side through the natural water drive.

TEXAS RAILROAD COMMISSION last week approved permits for drilling 203 new wells in Texas, four more than were permitted the week before.

From the East Texas field five permits were reported, including two in Gregg, two in Upshur and one in Rusk County. From the remaining part of the East Central Texas area nine locations were listed.

North Texas held first place in the state with 56 permits, including 17 in Archer and 16 in Wichita County. There were 14 locations approved in the Panhandle.

The commission granted 40 permits in Southwest Texas and 32 in the Gulf Coast district. From West Texas there were 30 locations reported, including 12 in Ector County, while 17 were granted in West Central Texas.

AN 8 PER CENT INCREASE in the demand for crude petroleum and its products in this country during the coming year was foreseen by Railroad Commissioner Ernest O. Thompson, chairman of the Interstate Oil Compact Commission.

His estimate, he said, was based upon national automobile sales figures and general conditions indicating an increased upturn in business.

While anticipating no immediate substantial increase in oil exports as a result of the war, Colonel Thompson pointed out that the war industries in America had stimulated employment which would in turn stimulate the use of oil products by consumers.

Currently he believed a statistically excellent balance was being achieved in the oil industry. Gasoline stocks are still too high—about 75,000,000 bbl. as contrasted with the 60,000,000-bbl. desirable level; but crude-oil stocks of 230,000,000 bbl. are as low as they should go. Heretofore, with crude stocks excessive, runs to refinery stills have been made from crude stocks. If production is held down to present levels, runs to stills must be also curtailed with a consequent reduction of the excessive gasoline storage, Colonel Thompson said.

He expected no increase from the European war because "there is no war." There has been no great movement of mechanized units; naval units are using but little more than in peacetime maneuvers; and there has been a reduction in civilian consumption, he pointed out.

KANSAS

Gov. Payne H. Ratner, who invited governors of the Mid-Continent oil states to Topeka to confer on ways of "combating the growing menace of federal control and the destructive effect of the reciprocal trade treaty with Venezuela" said he was hopeful a remedy for the situation might be found.

Governor Ratner conferred with Gov. Leon C. Phillips of Oklahoma, Gov. John E. Miles of New Mexico and representatives of the governors of Arkansas and Louisiana. No representatives were sent from Texas and Colorado.

The Kansas Corporation Commission postponed its announcement of December allowable production in the state until after the governors' conference.

December natural-gas requirements totaled 279,000,000 cu. ft. for the Lyons pool in Rice County, 717,000,000 cu. ft. from the Cunningham pool in Kingman and Pratt counties and 1,070,000,000 cu. ft. from the Otis pool in Barton and Rush counties.

GOV. PAYNE H. RATNER of Kansas, who strongly opposes federal government control of the oil business, called a conference of governors of other oil-producing states, which was held on Tuesday, December 5 at Topeka, to voice a protest against the proposed Cole bill

CALIFORNIA

WITH EXPIRATION of the Japanese trade treaty less than 2 months away, Japanese buyers are making preparations to move as much crude and refined oil as possible between now and January 26, 1940, as all indications point to the possibility the secretary of state will delay making any new trade treaty until certain conditions are met. In the meantime, Japanese military forces are making a concerted attempt to reach a decision of importance in China so that this matter can be adjusted at the earliest possible moment. Marine circles indicate that every Japanese tanker will make one and possibly two trips to California for cargoes between now and January 26. California marketers will probably be glad to dispose of any or all products in the hope that by reducing inventories they will be better prepared for a long pull ahead when Japanese business ceases or is limited. For several years California marketers have used the Japenese market as a balancing item to absorb surplus production. Developments during the next 60 days will mean a lot to California producers, because if this market outlet is cut off it may mean a severe reduction in crude-oil production to keep supply and demand in line. It is not likely that California marketers will again begin storing crude or refined oil because the outlook is not any too favorable for the immediate future. Some of this lost Japanese business may be absorbed by increased shipments to Russia, but this outlet appears rather restricted.

ARKANSAS

ARKANSAS OIL AND GAS COMMISSION on Friday, December 8, will grant a hearing in the case of Southwood Oil Co. which seeks a permit to drill a well as an exception to the field rules for the lime pool of the Magnolia field. The company wants to drill in the center of a 40-acre tract comprising N½ SW SW and N½ SE SW Section 23-17s-20w, Columbia County.

OKLAHOMA

THE SUPREME COURT OF OKLAHOMA affirmed the Oklahoma Corporation Commission's action in establishing a 20-acre spacing rule in the Noble pool in Cleveland County in a suit brought against the commission by E. V. Croxton and others.

ILLINOIS

ADMINISTRATION OFFICIALS ESTIMATE that a proposed increase in Illinois old-age pensions would cost the state about $4,000,000 a year, for which they said new revenue would have to be found.

Governor Horner said recently he favored a severance tax on oil production to offset the cost of raising maximum old-age assistance payments from $30 to $40 monthly, as contemplated in a forthcoming special session of the legislature.

Approximately 20 representatives of major and independent oil companies operating in Illinois conferred with the governor on oil legislation last week, but no conclusions were announced.

One conferee said proration and tax questions were discussed, and that "everyone there favored a state conservation law." He said there were fewer expressions from the oil men on the tax question but that "they seemed to think a tax is sure to come."

The estimated $4,000,000 yearly jump in pension payments applied only to state funds. The federal Government would match the Social Security Act amendments that became effective January 1.

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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Pennsylvania Prescription

The latest advances in crude-oil and lubricating-oil quotations assure that the Pennsylvania Grade industry will have the highest end-of-the-year prices since 1929, with the exception of 1936.

Present quotations for lubricating oils and crude oil are within 10 or 15 per cent of the highest level in a decade.

While there are oftentimes conditions in the Pennsylvania Grade industry which do not apply to the industry generally, a study of the recent changes will reveal conditions which have general significance.

The premium position which Pennsylvania Grade crude oil enjoys, now, as in the past, is largely due to the yields of lubricants obtained in refinery processing.

After experiencing satisfactory years in 1936 and 1937, crude and lubricating-oil prices in that area started a steady decline which continued through 1938.

Bradford Grade crude that year dropped 52 cents a barrel and the decrease in neutral oils and bright stocks was approximately 50 per cent. The Pennsylvania industry at the close of the year was faced with one of its most serious price situations.

Fortunately both the producers and refiners saw the light and began to apply the necessary remedy. Production was brought into line with current requirements. Excess stocks of crude and several lubricating oils were reduced to seasonal requirements.

Immediately, market conditions commenced to improve. When a substantial increase in demand developed in the late summer, due both to the war and to improved industrial operations, Pennsylvania operators as a group were in a statistical position to benefit. Prices of lubricating oils at refineries are now from 30 to 40 per cent higher than they were a few months ago.

This of course does not mean that the Pennsylvania industry can sit back complacently assuming that conditions will continue to improve indefinitely. Constant vigilance is the price that must be paid for sound conditions.

The principal lesson to be learned here by the industry generally is the close relationship between refined and crude-oil markets and their direct interdependence upon the statistical position of both. Refinery markets brought crude prices down and this unwanted trend did not change until the quotations for finished products started up again.

Right now gasoline is the weakest product in the market. Prices have declined at many points below the upturn of the early fall. Retail and wholesale markets reflect this unsatisfactory refinery situation.

This has developed despite the fact that the total demand for gasoline is running 5 per cent ahead of the same period in any previous year.

The reason, of course, is the continued excess production. Stocks have been accumulating since late September and are now approximately six million barrels greater than at the same period last year.

If this comparative situation continues the industry will find itself with more inventories on hand in 2 months than it should have at the end of March which is the normal peak-stock period of the year.

Recovery in the gasoline market is impossible under such conditions. The refining industry needs to heed the lesson which the Pennsylvania operators applied during the past year.

The immediate need of the entire industry is to correct this situation by bringing its gasoline production into line with current demand and a healthy winter accumulation of its principal products.

No one group of refiners can bring this about. It is the job of the entire industry.

Stripper Well Association Scores Federal Control

RESOLUTIONS protesting against passage of the Cole bill and criticizing the Venezuelan trade agreement as an attempt to "interfere with the laws governing the importation of foreign crude oil and fuel oil" were adopted by the Oklahoma Stripper Well Association at its annual meeting held December 1 in the Mayo Hotel, Tulsa.

W. A. Goforth, Tulsa, president of Valley Osage Oil Co., was reelected president, as were the other officers: Vice presidents, Charles E. Clowe, Ardmore; Carl B. Haun, Blackwell; John H. Rebold, Okmulgee; secretary-treasurer, Howard J. Whitehill, Tulsa.

Additional directors for 1940 were chosen as follows: Gerald Coburn, Skelton-Moore Oil Co., Bartlesville; C. D. Klingensmith, Sapulpa; Wirt Franklin, Ardmore; H. F. Worley, Foundation Oil Co., Tulsa; Curtis F. Bryan, Bryan Petroleum Co., Tulsa; J. D. Roberts, Okmulgee Supply Corp., Okmulgee; R. L. Gordon, Indian Territory Illuminating Oil Co., Bartlesville; Simeon C. Canary, Zephyr Drilling Co., Tulsa.

"We believe that no authority was given the executive branch of the Government to modfiy the excise taxes in any reciprocal trade agreement," said the resolution on the Venezuelan trade agreement.

"The Trade Agreements Act proposes that these negotiations should open foreign markets for our surplus commodities and should admit to this country commodities which are not produced in sufficient quantities here. Neither of these applies to the cut in the petroleum excise taxes.

"High-wage scales, labor limitations and increasing taxes make it necessary that an adequate price for pumping-well production should be higher than the price at which foreign oil can be sold in our own markets. This reduction in the excise taxes will make it possible for foreign oil to further cut the price the domestic industry now receives.

"Much of our domestic production is sold to companies who are importing foreign oil or to their affiliates who by this agreement will be in a position to reduce at will the price they pay for our oil.

"The many Oklahoma stripper wells producing oil of similar gravity to Venezuela crude are now partially or wholly shut down for want of market, and the proposed lowering of the tariff upon imported oils will only further aggravate this situation."

The Cole bill, which seeks to put control of crude-oil production in the hands of the federal Government, was denounced as inimical to the small-well operator.

"The federal Government has messed with everything else in the United States and now it wants to mess with the oil business," said Mr. Rebold.

The association, organized a year ago to protect the interests of stripper wells, of which there are more than 50,000 in Oklahoma, has done a good job in the first 12 months of its existence and gives promise of doing much more in the future, according to members who spoke at the meeting. These included Roy M. Johnson, G. W. Strawn, and T. Cox, Ardmore; Maj. J. H. Leavell, Tulsa; Mr. Rebold, Mr. Whitehill, Mr. Clowe, and others.

The association was credited with having been a major factor in bringing about the well shutdown in six states last August, which checked the decline in crude prices.

Wesley E. Disney, member of Congress from the first district of Oklahoma, was introduced as "a friend of the oil man, large or small." He spoke on the "National Situation as One Sees It in Washington."

The association joined with the Tulsa Chamber of Commerce at noon in giving a luncheon, at which Gov. Leon C. Phillips was guest speaker.

THE MARKETS*

CRUDE OIL: Texas oil fields were given four producing "holidays" last week with the result that the daily average production of that state fell off 492,190 bbl. from the average of the week before. This, with a decline of 21,600 bbl. per day in California and a drop in Kansas production, caused a decrease of 518,234 bbl. per day in the total crude output of the United States.

REFINERY: Increasing firmness in the heating oils, with likelihood of scarcity in some grades before the winter ends, is accompanied by accumulation of excessive gasoline stocks, caused in part by operations keyed to the demand for heating oils only. Gasoline weak. Naturals lost the quarter cent they gained in September. No relaxation has developed in lubricating oils and wax.

TANK WAGON AND POSTED DEALER: Socony-Vacuum advanced consumer tank-car gasoline prices 0.1 cent throughout its territory except in western New York. Continental reduced gasoline 4 cents in Salt Lake City and made smaller changes at other points. Scattered local adjustments were made by Standard of Indiana. Standard of Louisiana reduced motor fuel prices 0.5 cent in Tennessee.

FINANCIAL: Oil issues continued their decline, and trading in them was increasingly cautious. Average of 30 representative stocks for week ended December 2: High, 27.14; low, 25.94; close, 26.22. Week ended November 25: High, 27.85; low, 26.63; close, 26.87.

*Detailed information in market section.

Sinclair Wyoming Oil Co. Buys Salt Creek Oil

WASHINGTON, D. C., Dec. 4.—Sinclair Wyoming Oil Co. of Tulsa, was the only bidder today on the Government's offer of oil from government lands in the Salt Creek (Wyo.) field. The offer was for all light royalty oil for 1 year.

The company offered 1 cent above the Salt Creek posted price, or 1 cent above Mid-Continent posted price of oil of equal, or lower gravity, as offered by at least two of the five major purchasers, whichever is higher.

The Sinclair company is the present purchaser of oil from the field under a 3-year contract which expires December 31. This contract provides for payment of a premium of 2½ cents a barrel above the posted Salt Creek crude or Mid-Continent prices. The Government's light royalty oil accruals from the field during the first 9 months of this year were about 475,000 bbl. compared with 660,000 in 1938 and 708,000 in 1937.

Marine Committee Watches Rising Fuel Prices

WASHINGTON, D. C.—Chairman Bland of the House merchant marine committee said he was "deeply concerned" over rising prices for ship fuel oil, which was being "closely watched" by his committee.

Pennsylvania Crude Advance Reflects Strong Position

OIL CITY, Pa., Dec. 4.—With the exception of 1936, prices of Pennsylvania Grade crude oil are now at the highest year-end level since 1929, the result of a 10-cent region-wide advance posted December 1 by the Joseph Seep Purchasing Agency of the South Penn Oil Co. and followed by all other buyers. Prices now range from a low of $2.09 for Eureka crude to $2.50 for Bradford-Allegany crude.

This and two previous advances this fall, totaling 50 cents a barrel, recognize one of the most rapid improvements in the statistical position of Pennsylvania Grade crude oil in years. In the 4 months ended October 31, withdrawals from storage totaled 755,035 bbl. or almost 14 per cent of total stocks on hand as of June 30. In addition an estimated 105,000 bbl. were withdrawn during November.

While demand exceeded production by a good margin in July, it was not until August that the full effect of the somewhat better demand for refined products was reflected in runs to stills. In the last 4 months daily average runs to stills have been 81,900 bbl. against 73,500 bbl. for the first 4 months of the year. This is an increase of better than 11 per cent.

Improvement in the position of the crude-oil market is the natural reflection of a vastly improved refined market, both statistically and pricewise. The improved statistical position of refined products, particularly the lubricating oils on which the Pennsylvania refiners depend for a profit, is revealed in the most recent report of the National Petroleum Association on inventories. Neutral inventories on October 31 were at the lowest month-end point since December 1934, and bright-stock inventories at the same time were at the lowest month-end level during the 5 years for which data are available. These inventories have been declining almost without interruption since reaching all-time highs in the early summer of 1938.

Conservative operation by refiners rather than an extraordinary gain in demand has been the basic factor in the improvement in the Pennsylvania region. Shipments for the first 10 months of this year, calculated from N.P.A. reports, are running only slightly above last year. Combined bright stock and neutral shipments in the 1939 period are estimated at 161,000,000 gal. against 155,000,000 gal. in the corresponding 1938 period. The less than 4 per cent gain is regarded as hardly sufficient to account for the marked improvement in prices.

The improvement in lubricating oil prices in the past 4 months has been sensational. At the first of August, 25 pour, 200 viscosity neutral was quoted at 16½ cents; 150 viscosity neutral, 14½ cents, bright stock, 16 cents and 600 steam refined, 8 cents. At the end of November those products were quoted at 27 cents, 25 cents, 25 cents, and 15½ cents, respectively. The increases ranged from 7½ cents on 600 steam refined to 10½ cents on the neutrals. Steam refined prices have advanced almost 94 per cent in that period and bright stock prices, 56 per cent. Spot market sales, particularly on lower pour-point material, have been even higher. However, the bulk of material is moving under contract.

Chiefly because of the low-inventory position of Pennsylvania lubricating oil inventories, prospects for the last month of the year are that there will be no reaction of consequence during that time. Consequently, both producers and refiners are regarding 1940 optimistically since they enter the year at the best statistical and price position they have enjoyed in a decade.

Hull Defends Trade Treaty Answering Oil Critics

By HENRY D. RALPH

WASHINGTON, D. C., Dec. 4.—The administration has no thought of reconsidering the reciprocal trade agreement with Venezuela in spite of the vigorous protests of domestic oil interests against the reduction in the excise tax on imported crude and fuel oil, it is indicated in a letter from Secretary of State Cordell Hull to Gov. Payne Ratner of Kansas.

Governor Ratner telegraphed Secretary Hull November 7, urging reconsideration of the Venezuela trade agreement on the ground that the oil concession would be detrimental to the oil industry. In a lengthy reply Secretary Hull vigorously defended the trade-agreement program in general and particularly upheld the reduction in the oil excise tax on the ground that it would not seriously injure domestic industry. He pointed out that the United States exports more petroleum products than it imports and declared the oil industry has benefited on the export side by concessions obtained from foreign countries in 11 other reciprocal trade agreements.

Cites Hearings

Representations made by spokesmen for the petroleum industry at public hearings on the Venezuelan agreement in August 1938, together with briefs submitted and other information available to the government, were carefully considered by the interdepartmental committee on trade agreements before the Venezuelan agreement was signed, Secretary Hull stated, indicating that no additional facts could be presented should the matter be opened for reconsideration. He declared:

"After the most careful study in this manner of the interests of the domestic petroleum industry and of other industries which might be affected, as well as the interests of the country as a whole, the decision was reached by the trade-agreements organization that it would be possible, without in any way injuring either the petroleum industry or any other domestic industries, to modify the import tax on crude petroleum and fuel oils, in the manner in which this was done in the trade agreement with Venezuela, as a part of an arrangement under which, in exchange for such carefully safeguarded adjustments on our part, that country would accord us valuable concessions for many of our important agricultural and other exports."

No Hardship

The Venezuelan agreement goes into effect provisionally December 16, and following that date the import tax on crude petroleum and fuel oil will be ¼ cent per gallon in place of ½ cent on total imports from all countries in any one calendar year up to 5 per cent of the total quantity of domestic runs to stills in this country during the preceding calendar year. In asserting that this should not work a hardship on domestic industry Secretary Hull wrote Governor Ratner:

"In view of the fact that the amount of crude petroleum and fuel oils which may be imported annually at the reduced rate of tax represents such a small proportion of domestic refinery output, it is difficult to perceive how such imports could adversely affect the domestic petroleum industry to any important degree. Moreover, it is difficult to perceive how the concession on crude petroleum and fuel oils in the Venezuelan agreement could have any adverse affect upon efforts to conserve domestic oil resources. This is so, not only because of the fact that the amount of imports at the reduced rate of tax is limited to such a small proportion of domestic refinery output, but also because of the fact that variations in the amount of such relatively small imports are determinable under the agreement in direct proportion to variations in domestic output. If domestic output should increase in a given year it would be possible for imports at the lower rate of tax to increase proportionately. However, the absolute amount of any possible increase in imports at the lower tax rate would be only one-twentieth as large as the actual amount of the increase in domestic output. On the other hand, the amount of permissible imports at the lower tax rate would be reduced proportionately if domestic output should decline.

Type of Crude

"The type of crude petroleum imported from Venezuela is much heavier than the average domestic crude and yields principally heavy fuel oil and asphalt. Most domestic crudes yield larger percentages of gasoline and kerosene, and superior grades of lubricating oil; in other words, the more valuable petroleum products. Also, imported fuel oil, or fuel oil produced in this country from imported crude, are chiefly much heavier than fuel oil produced from domestic crudes. The domestic demand for all grades of fuel oil, including both the heavy grades for ships' bunkers and industrial plants and the lighter grades for diesel engines and residential heating, has been increasing. Production in the United States of heavy fuel oil from low-grade foreign crude and the importation of heavy fuel oil tend to reserve the high-grade domestic crudes for production of the more valuable petroleum derivatives. Therefore, from the viewpoint of the most efficient and economic use of our petroleum resources, imports largely supplement, rather than compete with, domestic petroleum production.

"As you doubtless know, for a number of years, including the periods both before and after the original imposition of the import tax on petroleum in 1932, this country has exported considerably more crude petroleum and petroleum products than it has imported. In 1937, for example, imports of crude petroleum into the United States amounted to 27,484,000 bbl., while exports amounted to 67,234,000 bbl. In 1938 the excess of exports was even more marked, with imports amounting to 26,412,000 bbl. as compared with exports of 77,273,000 bbl. In the case of refined petroleum products, the position of the United States as a net exporter is even more evident, with imports in 1937 of 29,073,000 bbl. and exports of 105,600,000 bbl. In 1938 the excess of exports amounted to almost 90,000,000 bbl., with imports of 27,736,000 bbl. and exports of 116,633,000 bbl. Thus, for both classes, our surplus of exports in 1938 was about 140,000,000 bbl.

"So far as foreign trade is concerned, therefore, it is apparent from the foregoing statistics that export markets for the products of the domestic petroleum industry are of great importance."

Concessions of Value

Secretary Hull then turned to the benefits to the petroleum industry from export concessions obtained from other nations through the reciprocal-trade program and declared:

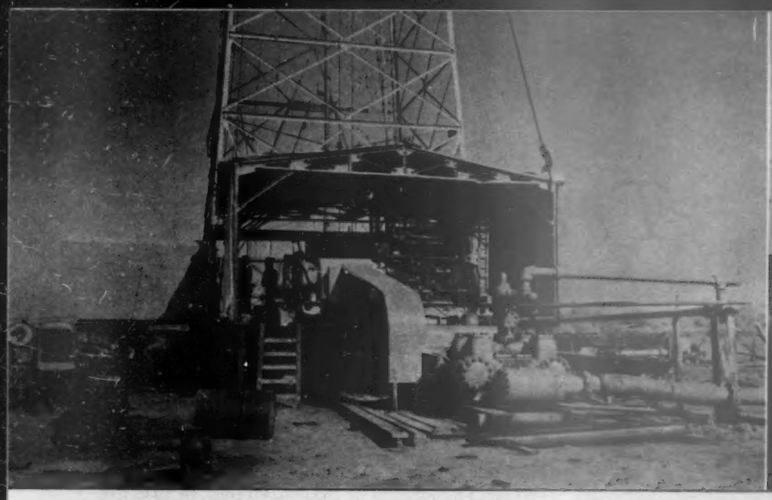
"Concessions of value have been secured for American petroleum products in 11 of the reciprocal-trade agreements thus far concluded. On various petroleum products lower duties have been obtained in five of the agreements; increased quotas were obtained in one agreement and bindings of the existing duty or duty-free entry in six agreements. While no claim is made that increased exports to these countries were solely the result of those concessions, significant increases in exports have occurred in these concession items. For example, in the first trade agreement with Canada, which was in force from January 1, 1936, to December 31, 1938, reductions in Canadian duties on petroleum products were secured on a number of items of interest to the United States and these concessions are continued in the new Canadian agreement. Our exports of petroleum products to that country, on which duty reductions were obtained, increased from $4,837,207 in 1935, the year before the agreement came into force, to $6,871,650 in 1937 and $9,872,870 in 1938 (preliminary data).

"In the two full calendar years since Switzerland extended increased quotas on fuel oil, kerosene, lubricating oil, and gasoline, Swiss imports of these products from the United States have averaged over $2,000,000 or 80 per cent more than the average imports for the two preagreement years."

Asserts Benefits

In addition, Secretary Hull stressed the broader point that all domestic industry benefits by increased foreign trade brought about by the trade-agreements program and declared that during the 2-year period 1937-38 our average annual exports to 17 countries with which trade agreements were in operation increased by 61 per cent as compared with the 2-year period 1934-35, while exports to other countries increased by only 38 per cent. He concluded:

"There can be no doubt that a vigorous foreign trade contributes considerably to our national prosperity. By means of mutually profitable trade agreements involving reciprocal adjustments of excessive trade restrictions, the trade-agreements program is helping to restore and expand our formerly prosperous foreign trade. In this way the program is doing much, both directly and indirectly, to promote the prosperity of the entire country and to enhance the demand at home and abroad for American products."



Butane-engine-powered rotary drilling in the Sikes area. Most rigs in the field are powered with either diesel or butane engines, with the latter being in the majority

Completing a 4,300-ft. producer as a twin to a 3,800-ft. well in the Hull-Silk field. Twinned wells are drilled about 75 ft. apart

Activity in Hull-Silk Field Increasing Rapidly

By D. H. STORMONT

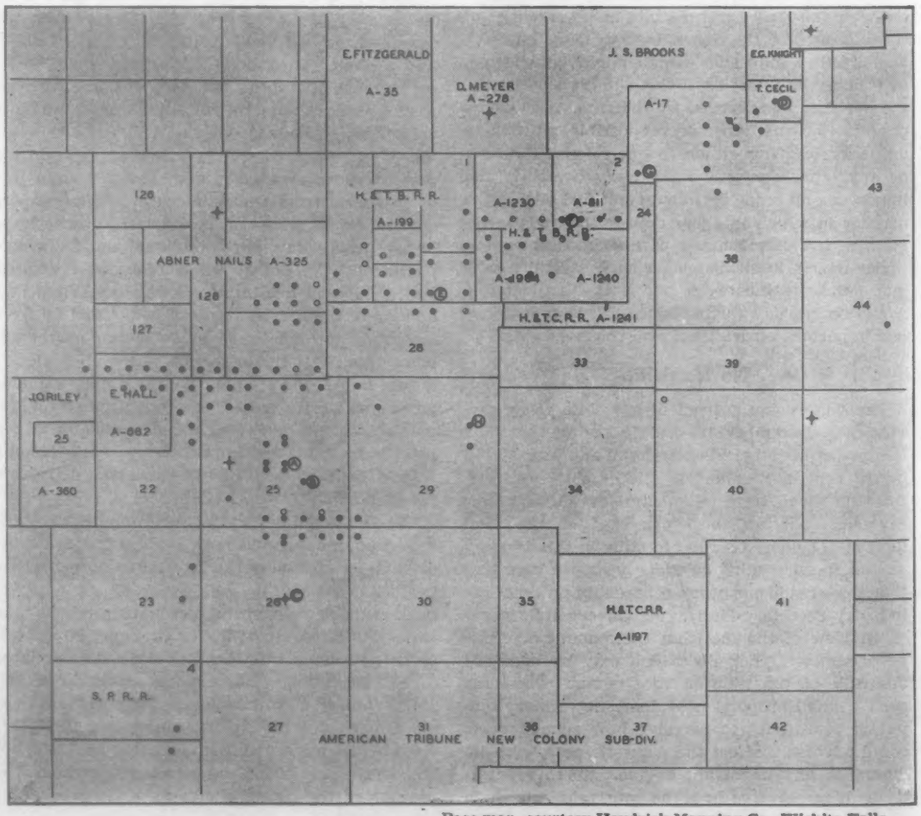
FORT WORTH, Tex., Dec. 4.—Activity in the Hull-Silk field of northern Archer County has increased rapidly during recent months until it is the second most active in North Texas, being exceeded only by the neighboring K.M.A. field. The field's limits are continuously being extended in almost all directions, and while it probably never will approach K.M.A. in size, Hull-Silk's productive limits are expected to be extended still further. At this time there are 40 wells drilling, or in various stages of completion, and 20 locations are staked for immediate development.

The field entered only recently a rapid development stage, after passing through a period of some 12 months wherein drilling was carried on at desultory rates. In the forepart of August, when the field was almost 1½ years old, there were less than 40 producers completed, and by October 15 the number had been swelled to 56. There are now almost 90 producers, with the number of completions per week tending to increase. This acceleration in drilling is due mainly to the 25 per cent increased well allowables granted the field in October, and to the greater willingness of crude-oil purchasers to take on new connections. Also, to some extent, twinning of wells in the areas where the two major pays are present is causing increased activity.

The discovery well, Hull & Silk's No. 1 L. F. Wilson estate (see Well A on accompanying map) in Lot 11, Section 25, A.T.N.C.L. Survey, was completed in March 1938 flowing 96 bbl. of oil in 30 minutes from 40 ft. of saturated lower Strawn sand below 3,825 ft. Helmerich & Payne and Blackwell Oil & Gas Co. purchased the discoverers' interest in the discovery block and other acreage soon afterward, and drilled a southwest offset to 5,270 ft. to fulfill a drilling contract of the original lease. Some saturation was encountered at that depth and in the 3,800-ft. pay, but a better pay section was found at 4,350 ft. No. 2 Wilson (Well B) was completed in the deeper pay, flowing 72 bbl. recent weeks, when six wells were drilled to this in 3 hours, in the following July, but north and west offsets to the 3,800-ft. discovery were completed in the shallower pay.

No other 3,800-ft. producers were drilled until recent weeks, when six wells were drilled to this pay. Some of these 3,800-ft. wells offset producers of other operators that had been carried to the 4,300-ft. pay, necessitating that twinning of locations be started. Some four or five twin wells, drilled 75 ft. apart, have been completed since and drilling of several more is under way.

Extent to which twinning operations will be carried out depends largely over how great an area the 3,800-ft. pay is found; and to some extent on the policy of the operators. The shallower pay is believed to be confined to the discovery well's area in the southeast portion of the field, and is not present in the north and northeast areas. The 4,300-ft. pay section is more permeable and better saturated than the 3,800-ft. zone, and averages much thicker (about 60 ft.) in the areas where both are present. Due to the cost involved, twinning operations probably will be kept to a minimum, but,



Map of the Hull-Silk area, second most active in North Texas, showing producers, drilling wells and locations; also prominent wells in the field's development

Base map, courtesy Heydrick Mapping Co., Wichita Falls

since such development has been started, the practice will have to be carried on, and will result in the drilling of many additional holes due to the diversified lease ownership.

In general, drilling of Hull-Silk wells has been with the view of completing them in the 4,300-ft. pay. This, of course, was due to the better pay section usually encountered; but no small portion was due to the additional 5-bbl. allowable gained by drilling below 4,000 ft. (Marginal allowable of wells 2,000 to 4,000 ft. deep, 20 bbl.; 4,000 to 6,000 ft., 25 bbl.) Usually no cores were taken, or any tests made of the shallower pay, so that actual productive limits of the 3,800-ft. pay are not delineated. Several good wells have been completed in the 3,800-ft. zone ½ mile to the south of the discovery well. One-half mile further south, however, a hole recently was carried to 4,415 ft. and both pays were found insufficiently saturated to make a well (Well C). From present development, possible productive area of the 3,800-ft. pay seems confined to some 700 to 1,200 acres.

The deeper pay of the field, which now covers almost 6,000 acres, last week was definitely linked with the Sikes area 4 miles northeast of the Hull-Silk discovery area. When Louis Sikes completed the No. 1 Ford (Well D) in February of this year for a 200-bbl. producer in the lower Strawn pay at 4,375-4,402 ft., the area was believed to be on the same geological feature. After two other major extensions to the northeast (both completed since July), had reduced the intervening distance to 1 mile, the linking area was definitely proven for production last week upon completion of a producer about ½ mile out from the two areas.

First major extension to the east of the north end of the original area was Bert Ligon's No. 1 S. D. Johnson (Well E), completed in July for an initial potential of 1,328 bbl. daily at 4,311-48 ft. The well topped the lime at 3,806 ft., or 28 ft. lower structurally than the nearest Hull-Silk producer 1 mile to the west. In the latter part of August, productive limits were extended another mile northeast upon completion of Deep Oil Development Co. and R. G. Drilling Co.'s No. 1 J. A. Little (Well F), flowing 92 bbl. per hour at 4,315-30 ft. or on a level with No. 1 Johnson.

Completion of the Little producer cut the distance between the two areas to about 1 mile, which remained until late in November when Cato Oil Co. divided the distance with its No. 1 O. T. Anderson (Well G). This connecting well topped pay at 4,353 ft., about 37 ft. lower structurally than No. 1 Little, and was carried to a total depth of 4,387 ft. Thus, the two areas have proven to be on the same high, although present development indicates the presence of a saddle in the neighborhood of the Cato producer. Lateral limits of the field are defined to some extent; but extensions continue to push productive limits outward. Most recent major extension was Bert Ligon and others' No. 1-C Wilson (Well H), extending production ¾ mile to the east in the southeast portion of the field. This producer, completed for an initial potential of 720 bbl. daily, topped the pay at 4,346 ft. or some 10 ft. higher than wells in the discovery area and ¼ mile to the east.

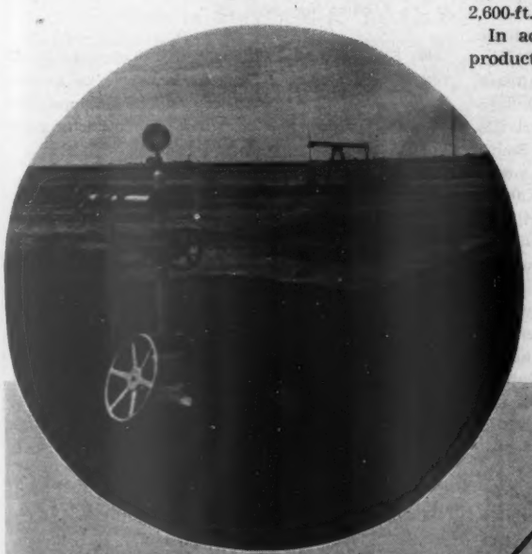
Structure of the field is a long nosing ridge, running in a northeast-southwest direction, and having about 50 ft. of closure. Dip is to the northeast, on an average of about 30 ft. per mile. There is some subsurface faulting on the structure, but not to any great extent. No bottom-hole water is encountered in the main body of the field, but in the northeast extension sector and mainly in the area where the saddle is present, water is encountered below the 4,300-ft. pay. This pay, which is the field's main producing zone, as the 3,800-ft. is not present throughout, is expected to yield somewhat higher recoveries per acre than the 7,500-bbl. average recovery forecast for the K.M.A. field. Original bottom-hole pressure in the discovery area was approximately 1,650 lb. at a minus 2,600-ft. datum.

In addition to the 3,800-ft. and 4,300-ft. pays, production is also being obtained from a 1,300-ft. zone in the north part of the field, and from a 4,000-ft. pay on the southeast side. Six wells have been completed in the shallow pay, five of which were twinned with a 4,300-ft. producer under the statewide spacing rule of 150-300 ft. The sixth producer is also twinned with a 4,300-ft. well on an offsetting lease. Three dry holes were drilling adjacent to the producers, so that its possibilities of lateral extension are negligible. The producing area, however, may be extended in an east-west direction; but it is not expected to be of any great extent. All wells were completed as pumpers, from about 5 ft. of pay, with comparatively small initial potentials.

On the southeast flank of the field Phillips Petroleum Co. and King Oil Co. recently carried a test to 4,821 ft. to test saturation in the Bend lime upon finding both the 3,800-ft. and 4,300-ft. pays dry. The Bend was topped at 4,735 ft. and when water was tested at the total depth the hole was plugged back and the well completed at 4,010-25 ft. for an initial potential of 980 bbl. daily after acidizing. One-fourth mile to the northeast, however, the same operators more recently completed a good producer in the 3,800-ft. pay. They are now drilling a third test ½ mile to the south of the 4,000-ft. producer, which will more fully determine pay zones in that area.

As operators become more familiar with the field, drilling time to the casing point has been reduced, until now about 2 weeks are required. No drilling problems are encountered except the large amount of shale drilled requires that the fluid be given sufficient time in the pits to allow the shale particles to drop out. Due to shortage of water and the hardness of the water that is available, no steam rigs are being used. Practically all rigs are either butane or diesel, with the former in the majority. After casing has been set operators either drill in with rotary under pressure or skid the rotary and complete with spudding machine.

In the Hull-Silk area a 330-660-ft. well spacing is being followed with 10-acre proration units. The Sikes area, however, is being drilled with a spacing pattern of 466 ft. from lease lines and 933 ft. between wells, or one well in the center of a 20-acre proration unit. Thus it is probable that a hearing will be held by the Railroad Commission in the near future to establish field rules pertaining to both areas. Formula for allocating production is the same in both areas; 50 per cent to acreage and 50 per cent to per well. Present allowable of the 3,800-ft. producers is 40 bbl. and that of the 4,300-ft. wells, 45 bbl. per day.



Left: Well-head connections on a 4,300-ft. producer with one of five 1,200-ft. wells on the same location shown in background.

Below: Dressing-up a lease battery in the Hull-Silk field. Operators vary in the practice of elevating separators

Wildcat in Arkansas Shows Oil And Gas in Drill-Stem Test

SHREVEPORT, La., Dec. 5.—An important wildcat in Columbia County, Arkansas, Standard Oil Co. of Louisiana's No. 1 Petty Stave Co., in Section 4-17s-21w, showed a good blow of gas and 370 ft. of mud, cut with oil and distillate, on a drill-stem test at 7,940-69 ft. The tool was open 10½ minutes. Bottom-hole pressure was 3,650 lb. The crew was coring ahead.

S. E. C. Oil Registration Form

The Securities and Exchange Commission has announced adoption of Form S-10 which is to be used for the registration under the Securities Act of 1933 of all types of oil or gas interests, whether producing or nonproducing. In addition to the requirements as to the productivity of the tract and to the rights represented by the interests, Form S-10 includes requirements with respect to the distribution of the interests being registered and to the cost of the registrant's interest in the tract. If the registrant is a corporation, additional items concerning its management are to be answered.

Nebraska Activity Increases

(Continued from Page 17)

geologist, and other members of the survey staff cooperate with the oil men in every way possible.

Few, if any, states have kept as complete records of the wells drilled within their borders as has Nebraska. The one state law affecting drilling operations directs the Conservation and Survey Division to secure and preserve the logs of wells drilled in the state.

The Geological Survey does not make public any information regarding a well until after it is completed, thus protecting operators. The operators of deep wells are required to take cuttings every 10 ft. in depth. These cuttings are placed in labeled sacks and forwarded to the survey, where they are arranged in regular sequence for study. Careful lithologic and paleontologic examinations are made of the samples to determine the subdivisions drilled and their correlation. A log and report are worked out and made for each well. From the cuttings received from each well, a complete set is placed in bottles and filed in cases for reference. Cores are preserved in frames numbered and labeled as to sequence and depth. Reports on the studies and classification of the cuttings are made to operators. The survey assists operators in the solution of problems relating to the age of strata being drilled and the probable depths to productive horizons; and, finally, a detailed log is worked out for each well.

Operators are not required to obtain permits to drill in Nebraska, nor are there any laws regulating the condition in which a well is left when abandoned. Naturally, there are no proration or oil conservation laws of any kind—yet, this early in the game, there is some talk among oil men at Falls City of seeking some kind of conservation measure.

Key to Bedrock Map

The accompanying bedrock map of Nebraska was prepared by Dr. Condra and Mr. Reed. The principal subdivisions of the bedrock as shown on the map, numbered from the youngest to oldest, are as follows: Tertiary—1-*A*, Ogallala formation on Brule clay; 1-*B*, Ogallala on Pierre shale; 1-*C*, Ogallala on Brule clay, probably underlain by Laramie and Fox Hill shales and sands; 1-*D*, Ogallala on Niobrara formation; 2, Arikaree-Gering and associated beds; 3, Brule clay and Chadron formation. Cretaceous—4, Pierre shale; 5, Smoky Hill chalk member of the Niobrara formation; 6, Fort Hayes limestone member of the Niobrara formation; 7, Carlisle shale; 8, Greenhorn limestone; 9, Graneros shale; 10, Dakota group. Mesozoic or Paleozoic—10-*A*, red beds undifferentiated. Paleozoic—11, Permo-Pennsylvanian; 12, Mississippian-Cambrian undifferentiated; 13, pre-Cambrian; *A*, Chadron dome. The Sundance and Morrison formations are present at depth in western Nebraska below the Dakota group and above the red beds, but do not occur as outcropping formations. These formations are represented in the cross-section by the blank area between Divisions 10 and 10-*A*.

The stratified beds vary considerably in thickness, being thinner on the anticline or structural highs and thicker in the basins. They range in thickness from about 600 ft. on top of the Nemaha arch in southeastern Nebraska to around 9,000 ft. in western Nebraska. It is recommended that those looking for possible oil and gas-producing formations examine closely the stratigraphy of the sedimentary formations from the old granite surface up to and including the Pennsylvanian system.

The Nebraska sector of the Forest City basin, as described by Dr. Condra, is outlined. Approximate location of the discovery well is shown by the arrow and circle.

Nearly every deep well that has been drilled in Nebraska has penetrated formations in which oil and gas could accumulate. More than 100 wells have been drilled to 1,000 ft. or more, almost every section of the state having had one or more test. The principal prospecting has been in the south central area along the Cambridge arch, following the play northwestward from the Barton arch of Kansas.

The deepest test drilled in the state to date was the Union Oil Co.'s No. 1 Agate, Section 15-28n-55w, in Sioux County, northwestern corner of state. It was spudded with rotary tools April 25, 1938, and was abandoned August 20 of that year at total depth of 6,846 ft. in Pennsylvanian formation.

Certainly the comparatively few deep wells provide no adequate test of the oil and gas possibilities of Nebraska. The state has an area of 77,520 miles, an extensive region in which only about 100 so-called deep tests have been drilled. More dry holes have been drilled locally in many oil-producing areas than have so far been drilled into the Lower Paleozoic strata in the whole state of Nebraska.

Geologic data indicate that approximately 34,460 sq. miles, or about 44.5 per cent of the state, is unfavorable for oil and gas, the remaining 43,060 sq. miles, or 55.5 per cent, to be prospective oil and gas land. The unfavorable area, according to some geologists, includes most of Nebraska lying north and east of the Cambridge arch, but with the southeastern corner of the state included in the favorable area—and now proven. The prospective area includes most of western Nebraska, embracing the eastern flank of the Chadron-Cambridge anticline and all of the country westward therefrom.

Principal geologic divisions of Nebraska include a deep syncline or basin in western Nebraska, apparently a part of the Julesberg basin of northeastern Colorado and probably extending northwestward into Wyoming and in between the Hartville uplift and Black Hills uplift of southwestern South Dakota; the Cambridge arch, believed to be a continuation of the Barton arch of western Kansas upon which many oil pools have been found; the Central Nebraska basin, taking in much of Nebraska between the Cambridge arch and the Nemaha buried mountains, and apparently an extension of the Salina basin of Central Kansas, where much production has been found; the Nemaha ridge in southeastern Nebraska, a continuation of the famous Oklahoma-Kansas ridge; and, dipping off to the east some 3,000 ft. more or less from the Nemaha ridge is the now proven Forest City basin.

Several Drilling Wells

The discovery of oil at Falls City has revived interest in all sections of Nebraska. Lease activity is reported in central and western Nebraska, and announcements of new tests to be drilled in those areas are anticipated. Wells now being drilled in the state, other than those in Richardson County, include:

Golden Rod Oil Co.'s No. 1 Sporrer, Section 8-11-13, Cass County, at 1,205 ft. in Viola lime on last report.

Peder Skriver's No. 1 Armour, Section 33-28-8e, Dakota County, shut down at 1,100 ft.

Dan Kornfeld's No. 1 Mathies, Section 22-5-1w, Fillmore County, underreaming 10-in. casing at 1,300 ft.

California-Nebraska Oil Co.'s No. 1 Stuehm, Section 21-14-37w, Keith County, reported showing oil at 2,895-2,901 ft., now shut down at 3,200 ft.

Albert Wood and others' No. 1 McHenry, Section 33-23-57w, Scotts Bluff County, shut down at 625 ft.

J. A. Fairy's No. 1 McCulley, Section 35-23-58w, Scotts Bluff County, slight showing of oil at 1,515 ft., shut down at 2,035 ft.

Mitchell & Battin's No. 1 Palmer, Section 1-33-50w, Dawes County, total depth 2,964 ft., preparing to deepen.

Bibliography: "Geologic Cross-Section, Forest City Basin, Missouri to DuBois, Neb." by G. E. Condra; "Deep Wells of Nebraska," by G. E. Condra, E. F. Schramm, and A. L. Lugn; "The Redfield Anticline of Nebraska and Iowa," by G. E. Condra and E. C. Reed; "Petroleum in the United States," by Ralph Arnold and W. J. Kemnitzer.

DEATHS

P. M. LAMPMAN, 56, formerly manager for Union Gas Co. at Tilbury, Ont., died at Windsor recently.

HERBERT CHARLTON, 48, field superintendent of Union Gas Co., died recently at Port Alma, Ont.

DR. CHARLES SKEELE PALMER, 81, Pittsburgh, Pa., inventor of a gasoline "cracking" process, died November 30. He developed the process in 1900 and 7 years later sold his patent to the Standard Oil Co. of Indiana.

SAMUEL M. WILT, 69, Wichita, Kans., independent oil operator in Kansas and Oklahoma since 1918, died at Wichita November 29.

ADDISON B. DAY, 65, chairman of Southern California Gas Co. until his retirement September 1, died at Los Angeles November 28.

W. F. BEANY MILLER, 58, who had engaged for 40 years in oil production work in Pennsylvania, Kansas, Oklahoma and Texas, died last week in Eastland, Tex. He was superintendent in charge of production for the States Oil Corp.

SAMUEL A. APPLE, 68, former Oklahoma oil man prominent in the development of the Carter County oil field, died December 4 in Los Angeles. He was associated with Wirt Franklin when the Ardmore field was opened. He went to California about 5 years ago, where he continued his oil business.

LUTHER MILLER, 81, veteran oil man of Pennsylvania, Ohio and Oklahoma, died December 4 at his home in Columbiana, Ohio. He retired about 1928. A native of Beaver, Ohio, he followed the drill through Pennsylvania, West Virginia, Ohio, Indiana, Illinois and then to Tulsa.

EUGENE METZ, 71, resident manager at Kansas City, Mo., for 35 years for American Meter Co., died November 28. He was one of the first members of the Natural Gas Association of America and one of the oldest members of the American Gas Association. He was a member also of the Southwestern Utilities Association and the Middle West Gas Association.

C. R. FULTON, 50, of Cushing, Okla., veteran employe of Texas-Empire Pipe Line Co., died December 3. He had been connected with Texas Co. since January 27, 1916, when he entered the employment of Texas Pipe Line Co. of Oklahoma. In June, 1927, he was transferred to the producing department, until March 1931, when he was transferred to Texas-Empire Pipe Line Co. at Cushing. He was the brother of F. R. Fulton, Tulsa, another veteran Texas Co. employe.

Leasing Spreads in Mississippi and Extends Into Alabama

BY GEORGE WEBER

JACKSON, Miss., Dec. 4.—Leasing activity, following geophysical and wildcat exploration is embracing most of Mississippi and extending to the east into Alabama. The beginning of a number of wildcats, coupled with the work of over 50 geophysical crews, maintained the momentum of leasing in the state.

The interest in Mississippi has by this time reached such a point that it is generally agreed it is no longer affected by what may happen at Tinsley, the state's first oil field. On its present momentum, the play is estimated good for 3 years. Much of the interest, however, still centers around the field and Yazoo County. Five counties to the north and west, Carroll, Holmes, Humphreys, LeFlore and Washington, are receiving play, and Madison, Hinds and Rankin counties to the southeast share prominently in the shooting and leasing.

Wildcats are staked for early drilling, or already under way in Attala, Copiah, Hinds, Issequena, Itawamba, Kemper, Lamar, Monroe, Pike, Prentiss, Rankin, Sharkey, Simpson, Wilkinson and Yazoo counties, and leasing around all such wildcat tests has been active. Interest is particularly keen in Hinds County, where Byrd-Frost, Inc.'s No. 1 Gaddis Farms, reported to be high, is drilling at about 5,000 ft. Rankin and Sharkey counties are also centers of interest with two new wildcat tests spudded. Wilkinson County, with a wildcat coring below 5,200 ft. in the Vicksburg formation, is another hot spot this week.

The Paleozoic area, or Northwest Alabama basin, is gaining in interest. In Itawamba County, Northeast Mississippi, G. C. Grasty's No. 1 Kentucky Lumber Co., wildcat, after showing oil in a Mississippian lime at 560-70 ft. several weeks ago, encountered a show of asphaltic oil in fine-grained sand at 1,150 ft., either Mississippian or Devonian in age. The test is projected for the Devonian at a total depth of 3,500 ft. To add to the interest in this section Willmut Gas & Oil Co.'s No. 1 Roberts in Monroe County, near the Amory gas field, is drilling below 1,000 ft.

Geophysical Work

In Mississippi alone there are now more than 50 crews shooting with various instruments. Seismograph crews number about 26, gravity meter 21, magnetometer 3 and three other types, 1 each.

Yazoo County leads with three seismograph parties, six gravity-meter crews and one each employing magnetometer and soil analysis. The remaining counties in which crews were working late last week are: Amite, one gravity meter; Attala, one seismograph; Carroll, one each, gravity meter and seismograph; Chickasaw, one seismograph; Copiah, one seismograph; Covington, one seismograph; Franklin, one gravity meter; Hinds, one seismograph; Holmes, one seismograph; Humphreys, two gravity meter, one seismograph; Issequena, two seismograph; Jones, three seismograph, one millivolt; Madison, four seismograph and three gravity meter; Monroe, one gravity meter; Sharkey, one seismograph; Rankin, two each seismograph and gravity meter; Stone, one seismograph; Warren, one magnetometer; Washington, one seismograph; Wilkinson, three gravity meter, one magnetometer; Winston, one gravity meter.

Tinsley Field Active

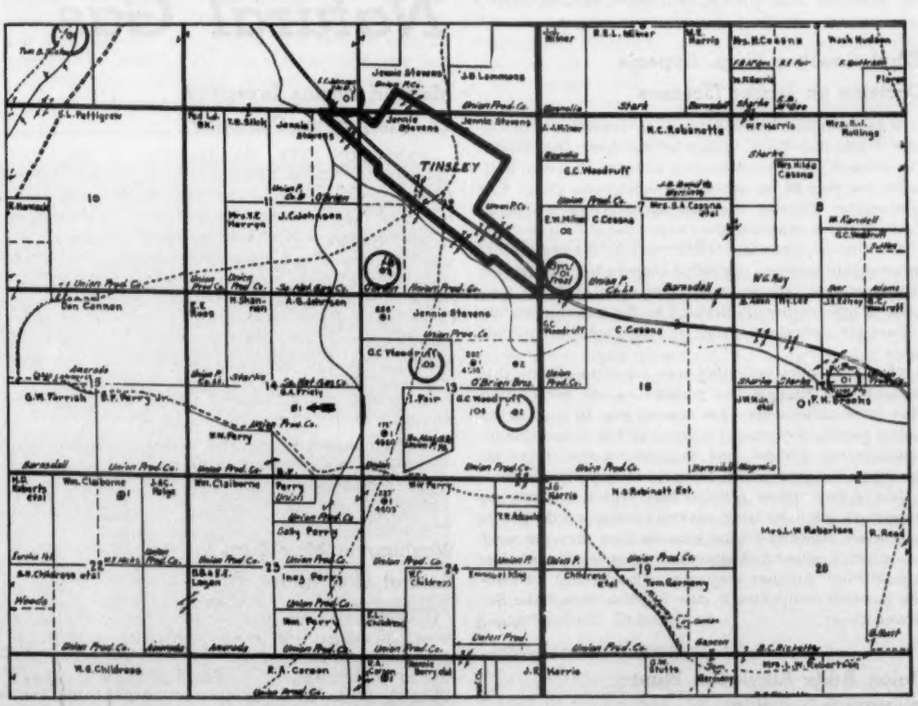
Despite recent setbacks, Tinsley field activity holds up, with wildcats drilling to the east and northwest, and edge tests on the northeast and southeast. The field's only Eutaw producer, Union Producing Co.'s No. 1 Stevens, has begun flowing salt water, and operators are having the well killed in an attempt to shut off the water. Already defined, together with the Selma production on the west by Union Producing Co.'s No. 1 Friley, the Eutaw formation also failed to show production on the east. The Selma chalk formation, in which lies the Woodruff sand, producing four wells, has been defined on the west and north. However, this sand showed a good section in Union Producing Co.'s No. 2 Woodruff, which topped it last week at 4,535 ft., and is a completion early this week. This well is located to the east of the discovery.

Of the operations to the north of the field, one, E. C. Johnston's No. 1 Broomfield, is shut down awaiting the outcome of the other wildcat, T. B. Slick, Jr.'s No. 1 Atkinson, which is drilling below 4,000 ft. To the east Yazoo Refinery, Inc.'s No. 1 Brooks is shut down with surface casing set and Harry Hanbury's No. 1 Brooks is still a location. Near production, Union Producing Co. has three active tests and a fourth due for early spudding, Jones & O'Brien have one operation and Plains Producing Co. has one well starting.

Up-to-date information on Mississippi wildcats and tests will be found on pages 97-105

Alamucha Structure

A structural area of a type favorable for the accumulation of oil and gas has been discovered in southeastern Lauderdale County, Mississippi, and adjacent parts of Alabama by Vellora Meek Foster, supervising geologist of the W.P.A.-Mississippi State Geological Survey, while making a mineral survey of Lauderdale County. The report has been prepared by the Mississippi Geological Survey, University, Miss.



Globe Map Co., Shreveport and Jackson

Drilling development in the Tinsley field of Yazoo County is extending over a wide area with three outpost tests, two edge tests and only one active well in proven acreage. The irregular character of the Selma chalk and Eutaw formation pay sections makes even edge tests of offsets semiwildcats. Here, active drilling tests are encircled, and the arrow indicates the field's first dry hole, which failed to find production in either horizon

Refinery Expansion

English Companies Construct Underground Refinery

An underground refinery is under construction in Great Britain, which may set a pattern for future installations in countries vulnerable to air attacks. Meager information is available on the project, but it was reported in New York that all oil companies in Great Britain, now functioning in a "pool," are cooperating on the plant.

Certain parts of the refining equipment are reported to be under design and construction in this country, but the work is so scattered that no one concern has any conception of just how the installation will appear or function in its finished state.

Refinery engineers speculated that radical changes in design of fractionating towers would be a logical step in the arrangement of all equipment below the earth's surface.

Particular emphasis is being placed on ventilation and the elimination of fire hazards.

W.P.R.A. Announces Feature Of Shreveport Meeting

Culminating a series of meetings held during 1939, which have been of much value to refiners in this area, the technical group of the Ark-La-Tex division of Western Petroleum Refiners Association will hold its regular monthly meeting on Friday, December 8, at the Washington-Youree Hotel in Shreveport. It begins at 4 p.m.

Pursuant to the wishes expressed by many of its members, and recalling the success of similar meetings in the past, officials of W.P.R.A. have concluded to devote the entire time of this final meeting in the 1939 series to questions and answers. There will be no principal speaker, and no special topic, but the questions submitted to the association by Ark-La-Tex refiners cover a broad field.

It is announced that A. W. Trusty, chief chemist of the Arkansas Fuel Oil Co., will serve as chairman.

Ethyl Gasoline Corp. Appeals Decision on Jobber Licenses

WASHINGTON.—Jobber-licensing agreements of the Ethyl Gasoline Corp., under attack from the Justice Department for alleged conflict with the Sherman antitrust law, may be examined by the Supreme Court. The corporation Tuesday filed an appeal from a District Court decision enjoining the further use of such licenses.

The District Court last May ruled that the agreements entered into between the Ethyl corporation and certain large gasoline refiners restricting sales of Ethyl Gasoline to jobbers directly licensed by the corporation "unreasonably restrained trade" and violated the antitrust laws.

The high court yesterday was asked to review this decision and support the position of the corporation that these agreements were entered into to protect the public health, prevent the dilution of Ethyl Gasoline by unscrupulous jobbers, and to preserve the rights inherent to the corporation from its uncontested patents.

Justice Department officials here regard this case an important link in its latest antitrust drive, and the agreements are attacked on the grounds that they are used to maintain prices and eliminate, or at least minimize, competition. Another antitrust action against 12 leading gasoline companies is now pending before the Supreme Court.

Union Adds Alkylation Plant To Wilmington Refinery

In order to keep abreast of the demand for higher-octane motor fuels, Union Oil Co. has just begun construction of an alkylation plant at its Wilmington refinery at Los Angeles Harbor, Calif. Ground has been broken for the project and it is expected that actual construction will be under way about December 10. Alkylation is one of the latest scientific developments of the petroleum industry, and uses as raw material a product of natural gas obtained in the fields together with cracking-plant vapors, to yield a blended gasoline product with a knock rating equivalent to that of 100 isooctane. Completion of this plant will enable the company to manufacture aviation gasoline meeting specifications of the U. S. Army and Navy. The plant proper will be constructed under contract by the M. W. Kellogg Co. of New York and Bechtel-McCone-Parsons Corp. of Los Angeles. The cooling tower will be furnished by the Fluor Corp. of Los Angeles. Present plans call for completion of construction work in June, 1940.

Imperial Expands Capacity Of Fort Norman Refinery

TORONTO, Ont.—Expansion operations undertaken this season will increase the capacity of the Imperial Oil Refinery at Fort Norman, in the Northwest Territories, from 300 to 880 bbl. a day. Crude from the Norman field will be used. Aviation gasoline will be supplied from the improved plant, at prices probably less than half the 90 cents a gallon previously charged.

Seneca Plant at Warren Bought By United Refining Co.

The Seneca Refinery at Warren, Pa., owned and operated for several years by the Sloan & Zook companies has been purchased by the United Refining Co. of the same city. The latter is now operating the plant as an adjunct to its own refinery in Warren. H. A. Logan is president of the United Refining Co.

Natural Gas

Missouri Begins Inventory Of Gas Service Company

JEFFERSON CITY, Mo.—Inventory of the utility properties in Missouri of the Gas Service Co. (Henry L. Doherty) was started December 4 by engineers of the state Public Service Commission at Joplin. It is estimated about a year will be required to gather all the information and make the appraisal in the 28 cities and towns in Missouri served by the company.

The inventory and appraisal was ordered by the commission several weeks ago. It will be the first valuation for Gas Service Co. which was reorganized about 4 years ago into an operating company to take over the management of a number of Doherty utilities. Prior to that time it had been a holding unit of Cities Service.

The commission ordered the inventory and appraisal for the purpose of determining rates to be charged by the company.

Washington May Turn to Natural Gas Alone

WASHINGTON, D. C., Dec. 4.—The possibility of using natural gas exclusively in the city of Washington is being studied by the Public Utilities Commission of the District of Columbia which has ordered an investigation to be made and probably will hold hearings some time in the future.

At present, the Washington Gas Light Co. retails a mixture of 30 per cent natural gas and the balance manufactured coal gas. The natural gas is supplied by Columbia Gas & Electric Co. which has two lines running close to the District of Columbia, one from Pikeville, Ky., through southern West Virginia, and one from northern West Virginia through Pennsylvania, via Coatsville. The former line was completed in 1930 and since then the local gas company has been purchasing 30 per cent of its gas to enrich the manufactured product. The natural gas is rated at between 1,100 and 1,200 B.t.u. whereas the manufactured gas is only 600 B.t.u.

The commission plans to investigate all phases of the proposal, including the adequacy and permanence of the natural gas supply, transmission facilities, cost of dismantling present gas manufacturing facilities or maintaining them for standby emergency purposes, the cost of adjusting consumers' appliances to handle natural gas, and probable adjustments which would be made in gas rates.

Crowley, Standard Gas Head

WASHINGTON, D. C., Dec. 4.—Chairman Leo Crowley, of the Federal Deposit Insurance Corp., said he would accept the position of chairman of the board of Standard Gas & Electric Co. but would remain with the F.D.I.C. several months.

Natural Gasoline

Tide Water and Seaboard Build Second Recycling Plant

Tide Water Associated Oil Co. and the Seaboard Oil Corp., largest single operating concern in the Cayuga field of Anderson County, were starting work on their second natural gasoline and recycling plant in the area, on the N. N. Wills tract. The plant will have a daily capacity of approximately 40,000,000 cu. ft. of gas with a production capacity of 25,000 gal. of gasoline daily. The companies completed their first plant on the Joseph A. Campbell lease about a year ago. A loading rack has been completed in the Long Lake field and a 4-in. line is to be laid from the Cayuga pool to the Long Lake area.

In the Long Lake field, the companies are testing a new gasoline plant. The plant has a capacity of 50,000,000 cu. ft. of gas daily with a daily gasoline output of 50,000 gal. The companies hope to have the plant in operation within the next few days.

Germany Starts Construction of Synthetic Gasoline Plant

A synthetic gasoline plant is now under construction in northeastern Germany, according to a report from Consul Redecker. The new plant located at Stettin will be larger than the Leuna Works, at present the most important synthetic gasoline plant in the Reich, with a capacity of approximately 350,000 metric tons annually.

Completion is expected to take 2 years although German authorities state that it will be in a position to furnish an initial output of gasoline by the middle of 1940 with maximum production reached about the end of 1941.

The plant is located in a strictly agricultural region, and according to German reports, instead of utilizing lignite or lignite tar as raw material, will be designed to process chiefly oil residue produced by the cracking process and furnished partly by imports, and will process also coal produced in the Silesian mines which it is claimed can be used economically for this purpose owing to favorable railroad freight rates and cheap water-transport facilities.

Unofficial estimates place the output of synthetic gasoline in Germany during 1938 at 1,500,000 tons, a five-fold increase as compared with production in 1933. Official statistics give Germany's gasoline production from all sources in 1937 as 1,260,000 metric tons, the great bulk of which was accounted for by synthetic plants.

German imports of gasoline have been steadily rising in recent years, reaching a total of 1,357,102 metric tons in 1938, and 882,601 metric tons in the first 7 months of the current year.

Pipe-Line Activity

Reduction in Crude Carried Cuts Pipe-Line Revenue

A quantitative estimate of the effect of Illinois production on the movement of crude oil and finished products by pipe line throughout the United States is given by the report on transportation revenue and traffic of large oil pipe line companies recently issued by the Bureau of Statistics of the Interstate Commerce Commission. The survey shows that for a 3 months period in 1939 the revenue decreased 11.4 per cent under the same period last year; the same pipe lines carried 3,584,775 bbl. less during the current period than they did a year ago. This is a daily average decrease of 39,000 bbl., approximately the amount being handled by tank-car shipment and small refineries in Illinois and adjacent states.

While the report does not indicate the earnings of the respective companies, it does reflect the gross revenue and shows there has been a sharp decrease in pipe-line transportation in particular areas and an increase in others. Pipe lines operating in the Mid-Continent, Texas and Louisiana and carriers delivering oil or gasoline from those areas to either eastern markets or Gulf Coast shipping points almost uniformly showed a decrease in traffic and revenue while most of the lines having their point of origin east of the Mississippi showed an increase.

The exceptions to the decrease in states west of the Mississippi were Texas Pipe Line Co., Texas-New Mexico Pipe Line Co., Pan American Pipe Line Co., and Continental Pipe Line Co. The former operates 4,399 miles of lines in Texas and Oklahoma and because of its advantageous position in some fields it increased its runs from 17,388,313 bbl. to 19,750,639 bbl. and its revenue from $2,370,401 to $2,709,297, an increase of 14.3 per cent. The Texas-New Mexico system consists mainly of a trunk line from the recently developed New Mexico fields to Port Arthur, Tex., and totals 1,131 miles of line; runs on this system increased from 3,746,723 bbl. to 4,247,024 bbl. and the revenue jumped from $965,983 to $1,112,124. The Pan American system (Standard of Indiana affiliate) has 109 miles of line into Port Arthur, Tex., and its runs increased from 5,432,281 to 5,527,727 bbl. and its revenue showed an increase of 4.7 per cent from $260,138 to $272,411. Continental Pipe Line Co. showed a revenue increase of 3 per cent with a rise from $318,575 to $328,066, but the amount of crude handled through its lines decreased from 3,845,181 to 3,736,730 bbl.; Continental has 1,127 miles of line in Kansas, Oklahoma, Texas and the Rocky Mountain area.

Twenty-four crude-oil lines showed a decline in revenue although four of these actually handled more crude during the 1939 period than they did in 1938. The net loss in traffic to these lines included 18,341,093 bbl. of crude for the 3 months. Three of the crude lines showing reductions were east of the Mississippi River.

Principal sufferers from the Illinois competition, decrease in traffic and per cent reduction in revenue are as follows: Ajax Pipe Line Co., 2,049,716 bbl. and 82.1 per cent; Atlas Pipe Line Co., 977,977 bbl. and 63.3 per cent; Texas Empire Pipe Line Co., 1,207,003 bbl. and 52.6 per cent; Humble Pipe Line Co., 4,231,043 bbl. and 20.7 per cent; Sinclair Pipe Line Co., 1,813,142 bbl. and 7.7 per cent; Oklahoma Pipe Line Co., 1,453,655 bbl. and 21.7 per cent; Stanolind Pipe Line Co., 1,666,913 bbl. and 11.7 per cent. Gulf Refining Co. pipe line showed an increase in traffic amounting to 1,595,743 bbl. but its revenue decreased 21.9 per cent, an indication that it suffered losses in transcontinental shipments. Four of the systems showing reductions in revenues were the largest in the country, Stanolind having 7,303 miles of line, Humble having 7,218 miles, Sinclair having 6,380 miles and Gulf having 5,772 miles. With the exception of the Humble system, the principal outlet for shipments is eastward.

Several eastern systems were also affected, including Michigan-Toledo Pipe Line Co. which showed an increase of 472,426 bbl. in traffic and a reduction of 22.1 per cent in revenue. Transit & Storage showed a decline of 4.0 per cent in revenue; Tide Water Pipe Line Co. showed a 30.2 per cent decrease and Buckeye Pipe Line Co. showed a revenue decrease of 0.8 per cent. Tide Water also disposed of part of its facilities during the period.

Largest increases in traffic and revenue accrued to lines having their principal operations in the eastern part of the country. The Illinois Pipe Line Co. dominated the group with an increase of 7,805,602 bbl. and 27.9 per cent or a $583,348 increase in revenue during the current period over the similar period last year. Other eastern systems showing an increase, gain in traffic in barrels and per cent increase in revenue are as follows: Bradford Transit Co., 227,906 bbl. and 14.0 per cent; Eureka Pipe Line Co., 515,408 bbl. and 0.5 per cent; Indiana Pipe Line Co., reduction of 39,171 bbl and increase of 2.1 per cent; National Transit Co., 596,073 bbl. and 1.7 per cent and S. W. Pennsylvania Pipe Line Co., 732,035 bbl. and 10.3 per cent.

Large gasoline systems were also affected, three of those delivering finished products from the Mid-Continent to eastern markets showing a decline, while two of the three eastern lines showed a gain in traffic and revenue; and one eastern line showed a decrease in traffic and revenue. A gain of 300,000 bbl. was seen in the amount of finished products handled by pipe line. Lines showing a loss in business included Phillips Pipe Line Co., Great Lakes Pipe Line Co., Sun Oil Line Co. and Susquehanna Pipe Line Co. Lines showing a gain were Tuscarora Oil Co., Ltd., and Keystone Pipe Line Co.

Fine and Rental Imposed In Utah Pipe-Line Case

WASHINGTON, D. C.—Secretary Ickes today ordered payment of $500 by the Utah Oil Refining Co. of Salt Lake City, subsidiary of the Standard Oil Co. of Indiana, for violation of federal statutes in the construction of an oil pipe line from Fort Laramie, Wyo., to Salt Lake City, Utah, over approximately 140 miles of public domain, without first securing government permission for the use of such land.

In addition, the company was ordered to pay $630 as annual rental in advance for the right-of-way over the public lands at the rate of $5 per mile per year, from the time it began its unauthorized construction on August 7, 1939. Ordinarily, such rental charges begin from the date upon which a government right-of-way permit is issued.

The action of the secretary was the first of its kind. Requirement of the payment followed a public hearing before Secretary Ickes on November 20, at which officials of the company asserted that unintentional oversight of provisions of the oil and gas leasing law of 1935 was responsible for the unauthorized construction of the pipe line.

"Although the company apparently had no deliberate intention to violate either the law or the regulations, there was a reprehensible disregard of the rights and interests of the United States. No one has the right to appropriate public lands for private use without specific statutory authority so to do and then only in strict compliance with the terms of the statutes and regulations," Secretary Ickes said in imposing the penalties.

The secretary said the company's application for a right-of-way would be approved, since investigation had shown the pipe line is in the public interest and will benefit the people of both Wyoming and Utah.

New booster station of Consolidated Utilities Co. at Shamrock, Tex., boosting field pressures to the Eagle City, Okla., facilities serving Kansas towns. 400-hp. angle-type engines

Texas Pipe-Line Taxation Before Appellate Court

AUSTIN, Tex.—Pipe line companies transporting oil across the state to tidewater for shipment elsewhere are subject to a franchise tax based on Texas income and appertaining investment items and not on their entire income and whole invested outlay, it was held by the Third Court of Civil Appeals when it affirmed the case of Edward Clark, secretary of state, v. Atlantic Pipe Line Co.

As a result of the court's decision, expected to be appealed to the Supreme Court, the state treasurer would return $9,246 to Atlantic with prorated interest since that sum was paid into the treasury under protest. If the judgment is upheld in the Supreme Court companies in similar operations will pay a far less tax than demanded by the state on January 6, 1937.

Construction Started at Lloydminster Plant

LLOYDMINSTER, Sask.—The Shaw Petroleum Co., headed by R. L. Shaw, has commenced construction work on the first unit of a tube-still refinery of 750-bbl. capacity to cost approximately $50,000. The plant will operate on crude from the Lloydminster and Vermilion fields, specializing in the production of methanol for the treatment of high-test gasoline.

PROGRAMS AND MEETINGS

A.P.I. Southwestern District Program Committee

The spring meeting of the American Petroleum Institute, southwestern district of the Division of Production will be held at the Rice Hotel, Houston, Tex., March 28-29, 1940, E. P. Hubbard, district chairman, announced.

Mr. Hubbard has appointed the following program committee for the meeting: L. A. Ogden, Pure Oil Co., Fort Worth, Tex., chairman; S. E. Buckley, Humble Oil & Refining Co., Houston, Tex.; M. G. Cheney, Anzac Oil Corp., Coleman, Tex.; R. O. Garrett, Arkansas Fuel Oil Co., Shreveport, La.; F. E. Heath, Sun Oil Co., Dallas, Tex.; J. P. Straight, Cities Service Oil Co., Gladewater, Tex.; and Harold Vance, Texas A. & M. College, College Station, Tex.

Ark-La-Texas A.P.I. Chapter Program

The second fall meeting of the Ark-La-Tex chapter of the American Petroleum Institute will be held in Shreveport, La., December 19, W. E. Schoeneck of Ohio Oil Co., secretary-treasurer, announced. The general subject of discussion will be production problems in the Rodessa field.

The meeting will be held at 7 p.m. at the Washington-Youree Hotel. L. M. Moffitt of the Triangle Drilling Co. is chairman of the chapter.

S.A.E. Annual Meeting Detroit, January 15-19

January 15-19 has been selected as the date of the 1940 annual meeting of the Society of Automotive Engineers, according to John A. C. Warner, general manager, who announced the 20 technical sessions, S.A.E. engineering exhibit, and the annual meeting dinner are to be held at the Book-Cadillac Hotel, Detroit.

More than 2,500 automotive executives will be on hand to hear last-minute engineering information on automobiles, commercial vehicles, aircraft and aircraft engines, diesel engines, fuels and lubricants, and allied subjects.

Taxation Meeting Program For Sessions at Houston

HOUSTON, Tex.—H. L. Stone of Humble Oil & Refining Co., Houston, Tex., and W. Leo Austin of Mid-Continent Petroleum Corp., Houston, general chairmen respectively of the Mid-Continent Oil & Gas Association's standing committee on state and local taxation and standing committee on federal income and excise taxation, have announced the program for the joint annual meeting of the standing committees of the association, which will convene at the Rice Hotel Thursday and Friday, December 7 and 8.

The joint annual meeting will be opened at 9:30 a.m. on Thursday, with a welcoming address by E. R. Filley, Texas Co., Houston. The first morning's session will be addressed by J. C. Hunter, president of the Mid-Continent Association, who will speak with regard to the necessity for a united tax front in the petroleum industry. Following the introduction of guests, Miss Darlene G. Anderson, attorney, Phillips Petroleum Co., Bartlesville, Okla., will address the morning session on "Basic Court Decisions Affecting Taxation."

The afternoon session on Thursday will be devoted to prepared discussions of state and local tax problems in the various states covered by the steering committees and subcommittees of the standing committee on state and local taxation. General Chairman H. L. Stone will preside.

Thursday evening those present at the annual meeting will be guests of the Houston petroleum tax representatives at dinner, to be served at 6:30 p.m. at the San Jacinto Inn.

The morning session on Friday, December 8, will be devoted to prepared discussions on problems and developments in the various federal taxes applicable to the petroleum industry, and to discussions of state income tax problems in states covered by the steering committees and subcommittees of the standing committee on federal income and excise taxation. General Chairman W. Leo Austin will preside.

At a general luncheon at the Rice Hotel at 12:15 p.m. Friday, to which the oil public is invited, the tax representatives of the petroleum industry will hear Fred A. Eldean, director of the tax foundation, New York City, who will discuss "Taxation and the Citizen."

National Petroleum Association Manufacture Meetings

The Department of Manufacture of the National Petroleum Association will meet in Bradford, Pa., on December 6, in Oil City on December 7, and in Butler December 8. The speaker will be Dr. E. R. Smoley, Lummus Co. His subject will be a summary of the gasoline picture as it exists today—with particular reference to Pennsylvania. It will deal not only with the methods of producing gasoline, including the latest developments reported at the annual meeting of the American Petroleum Institute, but with the economics of such methods.

A.A.P.G. to Recognize Outstanding Student

The outstanding geological student in Texas Technological College at Lubbock and Texas College of Mines at El Paso will receive at commencement exercises next June associate memberships in the American Association of Petroleum Geologists.

The award, to be made annually by the A.A.P.G. and the West Texas Geological Society, was announced by Berte R. Haigh of Midland, geologist for university lands.

CALENDAR OF EVENTS

December

MID-CONTINENT OIL AND GAS ASSOCIATION, general association standing tax committees, Rice Hotel, Houston, Tex., December 7-8.

WEST CENTRAL TEXAS OIL AND GAS ASSOCIATION, Mineral Wells, Tex., December 11.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, Philadelphia, Pa., December 4-7.

PETROLEUM ELECTRIC POWER ASSOCIATION, eleventh annual conference, Texas State Hotel, Houston, Tex., December 14-15.

MID-CONTINENT OIL AND GAS ASSOCIATION, annual meeting of general board, Tulsa, December 18.

AMERICAN PETROLEUM INSTITUTE, Division of Production, Ark-La-Tex chapter, Shreveport, La., December 19.

January 1940

SOCIETY OF AUTOMOTIVE ENGINEERS, annual meeting, Book-Cadillac Hotel, Detroit, Mich., January 15-19.

February

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, New York, February 12-15.

March

AMERICAN SOCIETY FOR TESTING MATERIALS, Statler Hotel, Detroit, Mich., March 4-5.

AMERICAN PETROLEUM INSTITUTE, Mid-Continent district, Division of Production, Wichita, Kans., March 14-15.

AMERICAN PETROLEUM INSTITUTE, Southwestern district, Division of Production, Houston, Tex., March 28-29.

April

WESTERN PETROLEUM REFINERS ASSOCIATION, annual meeting, Allis Hotel, Wichita, Kans., April 1-2.

AMERICAN CHEMICAL SOCIETY, Cincinnati, Ohio, April 8-12.

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, annual meeting, Stevens Hotel, Chicago, April 10-12.

AMERICAN PETROLEUM INSTITUTE, eastern district, Division of Production, Columbus, Ohio, April 11-12.

SOUTHWESTERN GAS-MEASUREMENT SHORT COURSE, University of Oklahoma, Norman, April 16-18.

NATIONAL PETROLEUM ASSOCIATION, semi-annual meeting, Cleveland Hotel, Cleveland, Ohio, April 18-19.

May

PETROLEUM INDUSTRY ELECTRICAL ASSOCIATION, Dallas, Tex., May 1-3.

NATURAL GASOLINE ASSOCIATION OF AMERICA, annual convention, Hotel Tulsa, Tulsa, May 15-17.

INTERNATIONAL PETROLEUM EXPOSITION, Tulsa, May 18-25.

AMERICAN PETROLEUM INSTITUTE, midyear meeting, Fort Worth, Tex. May 27-31.

June

AMERICAN SOCIETY FOR TESTING MATERIALS, Chalfonte-Haddon Hall, Atlantic City, N. J., June 24-28.

October

NATIONAL SAFETY CONGRESS, Stevens Hotel, Chicago, October 7-11.

November

AMERICAN PETROLEUM INSTITUTE, twenty-first annual meeting, Stevens Hotel, Chicago, Nov. 11-15.

Service on New Fields

Loco Hills Field, Eddy County, New Mexico

Compiled by The Oil and Gas Journal

GENERAL INFORMATION

Approved name.

Loco Hills oil field.

Geographical location.

The field is located in the extreme southeast corner of New Mexico in the east central part of Eddy County, which borders on Texas to the south; in Townships 17 and 18s, Range 29e, and in Townships 17 and 18s, Range 30e.

Principal towns and cities near the field.

Artesia, some 18 miles to the west, with a population of approximately 4,500, is the nearest town to the field. Hobbs, largest city in Southeast New Mexico, lies 70 miles to the east and has a population of about 15,000. Carlsbad, largest city in Eddy County and of which it is the county seat, lies 32 airline miles to the southwest or some 70 miles by road.

Cities and towns in which supply stores are located.

Practically all of the field's materials are supplied by stores in Artesia and Hobbs. Three supply companies, one tank company, and one cementing concern are located in Artesia and supply much of the field's requirements. Hobbs, with its many supply stores, well servicing companies, cementing, treating and acidizing branches, and other oil-field stores supply the bulk of the remainder of the field's supplies. In Lovington, 21 miles northwest of Hobbs and that much nearer the field, one large supply company has a store.

Railways serving the area.

Artesia is on a branch line of the Atchison, Topeka & Santa Fe Railroad that runs to Clovis where it joins the main east-west line, and to the south into Texas. Hobbs is on the Texas & Pacific Railroad, running from Lovington, through Hobbs, to Eunice and into Texas on the south to join the main east-west line.

Character of roads.

State Highway No. 83 passes 3 miles to the north of the field, the highway being partly paved and partly gravel and connecting Lovington and Artesia. Roads in some portions of the field are very sandy, making driving difficult; but for the most part lease roads are better than average oil-field roads.

Trucking companies.

Several trucking firms are located in Artesia, with a large number in Hobbs.

Hotels and other accomodations.

Artesia has three hotels, completely modern, but of limited accomodations. Hobbs has some 15 hotels to provide more adequate housing facilities.

Electric and power companies.

In the field no power or gas lines have been laid. The surrounding territory is served with current by the Southwest Public Service Co., while New Mexico Eastern Gas Co. supplies the natural gas.

DEVELOPMENT

Discovery well was H. E. Yates' No. 1 Yates, NW SW Section 6-18-30, completed on January 25, 1939, for 506 bbl. daily flowing from a saturated pay at 2,806-38 ft. A diagonal northwest offset was completed in March by Franklin Petroleum Co. as its No. 1-A Ballard in Section 1-18-29; the well being completed for a much better producer. Only little drilling resulted from the completion of these two wells; but in May, when a 5-mile extension was given the field, activity at once increased. Several wells were drilled in the intervening area, slight extensions to the north and south; and in September possible productive limits were extended some 4 miles to the southwest of the discovery well.

Completions to date.

There were 71 producers in the field as of December 1, with several wells in the process of being completed or awaiting final test.

Number of operations.

On December 1 there were 36 rigs drilling in the field and 9 locations staken in proven areas.

Future activity.

Development in the near future is expected to continue at about present rates of drilling, with five to eight producers being completed weekly on an average. There are approximately 4,500 proven acres in the field, with good possibilities of the field reaching 10,000 or 12,000 acres. Due to some areas being sparsely drilled, productive limits are indefinite. On the east side of the field, the nearest dry hole is 3 miles from production; on the northeast, north, and northwest flanks, production is not expected to be extended much beyond present limits; on the west and southwest sides dry holes tend to establish limits in those directions; thus the best chances for extension are apparently in the south and southeast directions. As stated previously, W. H. Martin and others' No. 1 Gates, 4 miles southeast of production, was completed for 170 bbl. daily in what is believed to be the Loco Hills pay; but no intervening tests have been drilled between the possible extensioner and the field to prove the area productive. Thus it appears that at least some 150 wells are yet to be drilled, on 40-acre tracts; with the possibility that the number will be higher.

Companies owning leases.

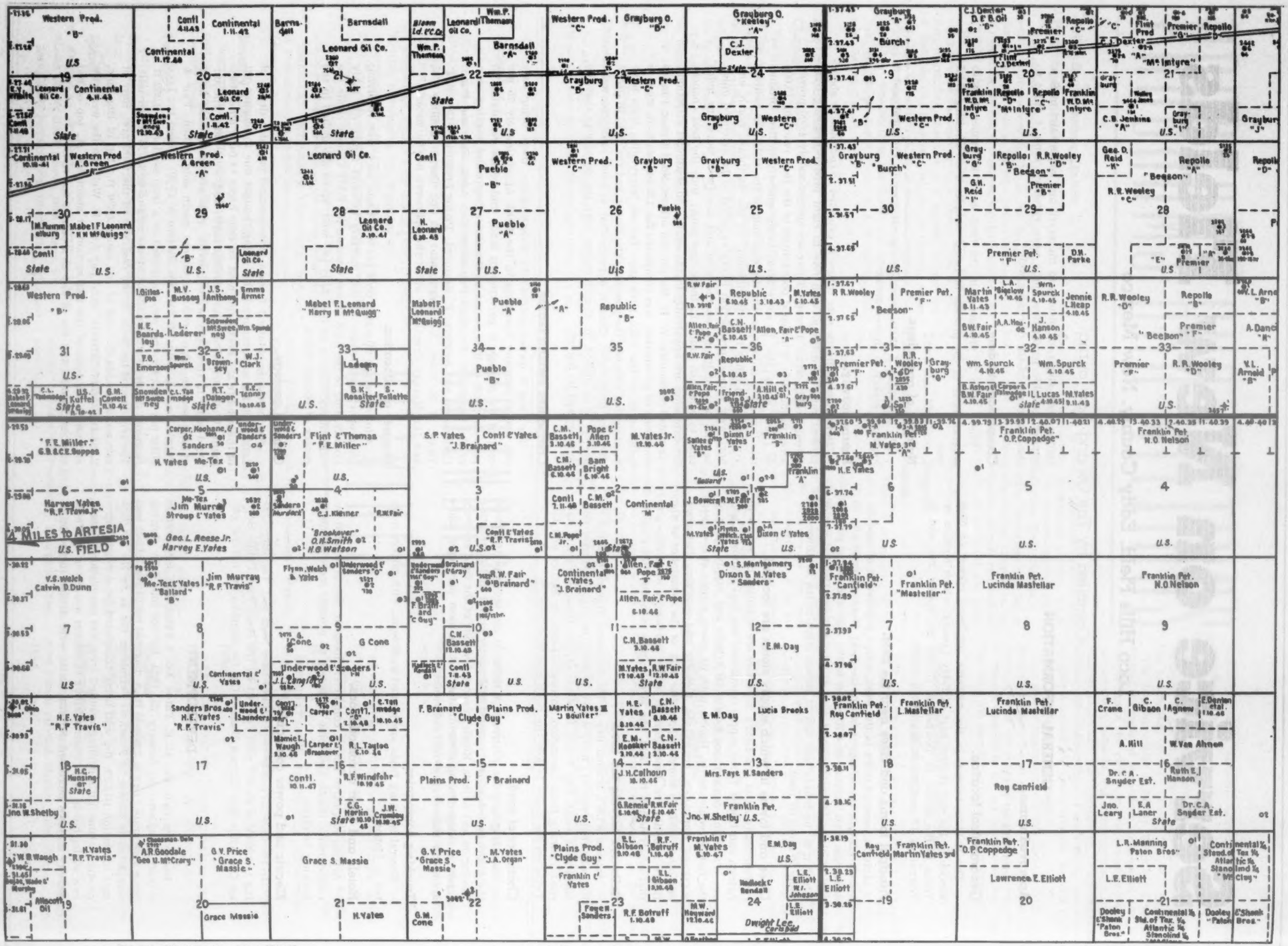
The field is owned entirely by independents, there being only one major company operating in the field. Approximately 75 per cent of the acreage is government land; and of the remaining 25 per cent most of it is owned by the state. Companies holding most of the leases are: Franklin Petroleum Co.; Allen, Fair and Pope; Underwood and Sanders; F. Brainard; Plains Production Co.; S. P. Yates; H. E. Yates, Jr.; Continental Oil Co.; Carper Drilling Co., and Jim Murray. Practically all of the operators live in Artesia.

Manner of allocation.

Allowables are allocated on a per-well basis, each well receiving its proportionate share of the monthly demand figure for Eddy County. Due to the high export demand for Eddy County crude the current allowable is 65 bbl. daily per well. Wells are drilled in the center of 40-acre tracts.

General geology.

Production is obtained from a Permian-sand pay at a depth of 2,600-2,800 ft., with accumulation being thought due to lensing out of the sand to the north and west on lime highs to form an embayment. Wells drilled on the extreme north and west sides encountered some 12 ft. of pay while interior wells average around 30 ft. of pay section. One producer on the north side (Allen, Fair & Pope's No. 4-A State, SE SW NW Section 36-17-29) missed the Loco Hills pay entirely and was completed in a lime section at 3,252 ft. Regional dip is to the southeast at the rate of 60 to 70 ft. per mile. Markers topped by wells in the east side of the field are: Base of salt section, 1,114 ft.; top of red sand, 2,290 ft.; top of Big lime, 2,631 ft.; top of "Artesia" sand pay 2,806 ft. Wells on the west side encounter the base of the salt section at about 890 ft., top of red sand at 2,130 ft. and top of pay at around 2,606 ft.



Zingery Oil Map Co., Fort Worth

Loco Hills area, Eddy County, New Mexico

Service on New Fields

DRILLING

Type of drilling equipment used.

Practically all drilling has been done with spudding machine. Only one standard machine is being used and no rotary rigs are in use at this time, although one or two rotaries were used earlier in the field's life.

Speed and cost of drilling.

From 25 to 35 days are required for drilling to the pay with the spudders; with a total of 35 to 45 days being required for the drilling, cleaning out after shot, and completing in the tanks. Cost of completing a well in the tanks varies from $12,000 to $14,000.

Water supply.

All water for drilling purposes has to be trucked to the field.

Fuel.

Natural gas is used for drilling some wells; but most of the drilling is done with diesel fuel or gasoline.

Size of hole and casing program.

Generally a 10-in. hole is carried to 375-450 ft. where an 8-in., 32-lb. salt string is set with 50 sacks of cement. A 9-in. hole is then carried to 2,500-2,700 ft. (about 100 ft. above total depth), and a 7-in., 24-lb. oil string is cemented with 100 sacks of cement. In cementing the oil string the cement is placed with 6 tons of mud as required by government rules.

Type engines.

Most spudders are powered by a 90 to 110-hp. gasoline or natural-gas engine or with 120 to 150-hp. diesel engine, with conventional belt drives to the spudding machine.

Shooting and acidizing.

After cement is drilled out and hole carried to total depth, wells are shot with 125 to 250 gal. of nitroglycerin, using 2 to 2½ yd. of gravel tamp. Usually from 10 to 14 days are required for cleaning out after shot.

Tubing used.

Practically all wells are equipped with 2-in. tubing.

PRODUCTION PRACTICE

Methods of producing oil.

All wells are completed as flowing wells, with the exception of one producer in the north central part of the field. Gas is the main driving energy, so that to prolong the flowing life of the wells proper location of tubing and conservation of gas is important. The wide well spacing will tend to prolong the flowing life of the wells; but since the field is mainly gas driven it is not expected to have too long a flowing life. Masts are usually erected over the wells upon their completion and no derricks are used. The wide well spacing will tend to make use of central powers and backside-crank pumping impractical so that individually powered units will probably predominate when the field is placed on the pump. The generally small size of leases also will tend to discourage the use of multiple-well hookup and central powers.

Separators and tankage.

Tankage is designed to suit requirements of the individual leases, with additional tanks being added as the lease is developed. Low 500-bbl. tanks are being most widely used, centrally located on the lease. Central separators of 125-lb. working pressure are used.

Water conditions.

Only one well in the field has produced any appreciable amount of bottom-hole water. Since no signs of water were shown in producers completed ½ mile to the east and ¾ mile to the west it is believed to be a local condition. The field is expected to be relatively free of water troubles.

GENERAL DATA

Pipe line outlets.

Until October 1 of this year all crude had to be trucked from the field, either to a gathering station in the Grayburg-Jackson area to the north, or to Artesia. Texas-New Mexico Pipe Line Co. since then has completed a gathering system and laid a line to its Grayburg station. The company is now increasing the capacity of its line from there to its Lynch station in Lea County by replacing a 5½-in. line with 8-in. pipe. This will boost the capacity of the line out of the Artesia area from 7,000 to 10,000 bbl. daily.

Refineries in nearby cities.

Five refineries are located in or near Artesia, four of which are operating and one shut down. The plants and their capacities are:

Continental Oil Co., 1,500 bbl.
Malco Refineries, Inc., 2,000 bbl.
Midwest Refining Co., 500 bbl.*
Pecos Diamond Refineries, Inc., 500 bbl.
Universal Refineries, Inc., 1,000 bbl.

*Shut down.

Crude-oil analysis.

An analysis of the crude produced by Yates and others' No .1 Yates is as follows:

General Characteristics

A.P.I. gr. at 60° F.	36.6	Cast	olive green
Sp. gr. at 60° F.	.8418	B.s., per cent	trace
Flash, °F., below	50	Sulpur, per cent	1.039
Vis. at 70° F., S.S.U.	44.6	Carbon residue, per cent	2.1
Vis. at 100° F., S.S.U.	37.7	Hard asphalt, per cent	.02
Vis. at 70° F., centistokes	5.8	Solt asphalt, per cent	3.83
Vis. at 100° F., centistokes	3.6	Chlorides as NaCl, gms./bbl.	4.0
Pourpoint, °F.	20	H_2S released at 650° F.	94.0

A.S.T.M. Distillation

	°F.
I.B.P.	116
5 per cent	164
10 per cent	208
15 per cent	238
20 per cent	272
25 per cent	304
30 per cent	344
35 per cent	386
40 per cent	426
45 per cent	470
50 per cent	517
55 per cent	560
60 per cent	607
65 per cent	636
70 per cent	650
75 per cent	660

Product—	400 e.p. gaso.	515° F. e.p. kero.	680°F. at 95% gas oil	Combined kerosene and gas oil	Residuum
Cut range, per cent	0–39	40–53	54–73	40–73	74–100
Yield, per cent	39	13	20	33	27
Gravity, A.P.I.	56.4	39.1	30.6	33.6	18.1
A.S.T.M. distillation:					
I.B.P.	118	430	570	420	...
5 per cent	152	440	586	460	...
10 per cent	170	446	590	475	...
20 per cent	196	453	598	500	...
30 per cent	218	456	603	515	...
40 per cent	237	460	610	539	...
50 per cent	257	466	619	544	...
60 per cent		472	627	566	...
70 per cent	300	480		594	...
80 per cent	326	486	652	617	...
90 per cent	354	498	667	642	...
95 per cent	372	...	680	657	...
Endpoint	395	516	685	677	...
Recovery, per cent	98	98	99	99	...
Residue, per cent	1	1	1	1	...
Loss, per cent	1	1	0	0	...
Color, Saybolt	30	21	...	...	...
Doctor	sour	sour	...	...	...
Copper strip, 3 hrs. at 122° F.	N.G.				
Sulfur, per cent	.187	.304	.992	.915	1.864
Octane, A.S.T.M. unblended	55	...	...	...	...
Octane, A.S.T.M. blended	57.5	...	...	...	...
Casinghead gaso. in blend, %	13	...	...	...	...
Flash (T.O.C.), °F.	...	200	...	...	...
Flash (P.M.), °F.	...	...	225	165	...
Flash (C.O.C.), °F.	...	...	...	...	465
Fire (C.O.C.), °F.	...	...	...	...	535
Viscosity (S.U.) at 100° F.	...	...	49.2	38.2	...
Viscosity (S.U.) at 210° F.	...	...	...	...	170
Pourpoint (max.), °F.	...	...	40	25	95
Pourpoint (min.), °F.	...	...	...	...	85
Color, A.S.T.M.	...	...	2½	2	(*)
Aniline point	...	...	167	157	...
Diesel index	...	...	51.1	52.8	...

*Color, dark brown.

Loco Hills area, Eddy County, New Mexico
Zingery Oil Map Co., Fort Worth

International

Haiti . .

Oil Concession Granted On 3,000,000 Acres

HAROLD C. BISHOP, of New York, has been granted a concession for 50 years on approximately 3,000,000 acres of prospective oil land in Haiti, according to a decree appearing in the official gazette of the country received in New York last week.

The concession provides for a three-year exploratory period after which 10 lots of 2,500 hectares each must be selected for retention and development. At least one of the 10 lots must be drilled and a "rental" of one gord (approximately 20 cents) per hectare paid on the remainder of the retained acreage.

The concession provides for payment of a 10 per cent royalty to the Haitian Government and one-half of 1 per cent to the surface owner. Land covered in the concession lies in the Culdesac Valley around Hinche.

One of the American major operating companies is negotiating for an interest in the concession and the principals are in substantial agreement on terms. Exploration will be started in the near future, probably with examination of surface conditions.

Rumania . .

Oil Exports Increased 3.1 Per Cent First Half

RUMANIAN petroleum exports during the first 6 months of 1939 amounted to 2,231,091 metric tons as against 2,164,939 metric tons for the corresponding period of 1938. This is an increase of 66,152 metric tons, or 3.1 per cent. The value of Rumanian petroleum exports during the first 6 months of 1939 amounted to 3,088,348,000 lei, as against 4,596,614,000 lei for the same period of 1938. This is an increase of 491,735,000 lei, or 10.7 per cent.

RUMANIAN EXPORTS BY CATEGORIES

	Quantity in tons	
Product—	1938 (6 mo.)	1939 (6 mo.)
Gasoline	749,905	842,451
Kerosene	404,365	444,350
Gas oil	375,082	303,788
Fuel oil	408,315	430,379
Mineral oil	18,702	17,042
Asphalt	12,234	9,593
Paraffin	2,775	3,754
Coke	2,648	.....
Crude oil	190,913	179,734
Total	2,164,939	2,231,091

While Rumanian exports of petroleum products during the first 6 months of 1939 showed an increase in value of 491,735,000 lei, the increase in quantity was 66,152 metric tons. This is an increase of 10.7 per cent in value and 3.1 per cent in quantity.

By contrast, Rumanian exports of petroleum products during the first quarter of 1939 showed an increase of 7.7 per cent in value and 18.6 per cent in quantity, compared to the same period of 1938.

The products which accounted mostly for Rumanian exports of petroleum were gasoline, kerosene, and fuel oil, showing an increase of 92,546; 39,985 and 22,064 tons respectively, while gas oil, crude oil, and mineral oil showed declines of 71,294, 10,891 and 1,660 tons respectively. No coke was exported in 1939.

Rumanian exports of petroleum products during the first 6 months of 1939 showed an increase, whereas Rumanian oil production showed a decline. Rumanian oil production during the first 6 months amounted to 3,099,789 metric tons, as against 3,328,939 metric tons.

RUMANIAN PRODUCTION AND ACTIVITY

	Quantity in tons	
Activity—	1938 (6 mo.)	1939 (6 mo.)
Production of crude oil	3,328,939	3,099,789
Refinery runs	3,027,261	2,930,790
Stocks of crude at wells	316,488	286,560
Refinery crude stocks	137,841	105,253
Stocks of oil products in stations	287,037	253,335
Stocks of products at refineries	475,461	468,692

The table shows that both oil production and all other lines of oil activity declined during the first 6 months of 1939, compared to the same period of last year.

The following table shows Rumanian exports of petroleum products by countries of destination during the first 6 months of 1939, compared to the like period of 1938.

RUMANIAN EXPORTS OF PETROLEUM PRODUCTS

	Quantity in tons	
Country of destination—	1938 (6 mo.)	1939 (6 mo.)
Germany	318,940	427,836
England	171,817	343,191
Italy	260,755	330,101
Czechoslovakia	149,223	252,112
France	157,486	111,425
Belgium	20,013	111,020
Hungary	96,849	98,882
Yugoslavia	57,036	81,328
Egypt	176,369	69,622
Switzerland	40,000	50,298
Greece	134,808	42,513
Bulgaria	30,664	35,647
Other countries	356,433	130,116
Used by ships	164,546	147,000
Total	2,164,939	2,231,091

The table shows that Germany had the largest share in Rumanian exports of petroleum products during the 6 months of 1939, followed by England and Italy, while for the same period of 1938, Germany stood first, Italy second and England third.

The countries which accounted mostly for the increase of Rumanian exports of petroleum products during the first 6 months of 1939 were England, Germany, Czechoslovakia and Italy, exports of petroleum products to these countries exceeding by 171,374, 108,896, 69,346, and 102,889 metric tons respectively exports during the corresponding period of 1938, while exports to Egypt, Greece and France declined by 106,747; 92,295 and 46,061 metric tons respectively. Exports to other countries, as well as the amount used for ships, showed a considerable decline.

Rate of exchange: $1 equals 45 lei. Metric ton, about 7 bbl.

England . .

New Rationing Orders; 5 Prospecting Licenses

THE British Mines Department has issued regulations on supplementary petrol ration coupons, stating that owners of vehicles and industrial plants who have been issued one month's additional petrol rations should apply for the second month, if needed for essential purposes. In some areas 2 months' allowances were granted at the start, but these must wait for the third month before applying again.

The secretary for mines has made an order prohibiting the use of kerosene or "paraffin," either alone or mixed with motor spirit or diesel oil, in any motor vehicle. The only exceptions are agricultural tractors and engines, which are to be used on roads only when engaged in purely farming operations. It will be an offense to sell or supply kerosene for use in a motor vehicle or to use kerosene for this purpose; considerable quantities of kerosene (including mineral vaporizing oil) having been used.

Owners of private cars and motorcycles are particularly requested not to submit claims for supplementary allowances unless they are urgently needed for essential purposes.

The secretary for mines announced the determination by the licensee of five prospecting licenses to the Gulf Exploration Co. (Great Britain) Ltd. The areas cover about 179 sq. miles in Kent, including the town of Maidstone; 161 sq. miles in Sussex, including the town of Battle; 162 sq. miles in Wiltshire and Dorset, including the town of Shaftesbury, and 15 sq. miles and 127 sq. miles in Dorset, including the town of Swanage and the village of Compton Valence.

The secretary also announced that Anglo-American Oil Co., Ltd., had surrendered a portion of the area of a prospecting license covering approximately 20 sq. miles in Yorkshire, including the village of Nunthorpe. An extension of area of this license was granted to include an additional 30 sq. miles in Yorkshire and the adjacent bed of the sea, including Runswick Bay.

Germany . .

New Synthetic Gasoline Plant To Be Constructed

THE construction of a large synthetic gasoline plant near Stettin to process oil residues and rock coal from mines in Silesia is described in a report from S. B. Bedecker, American consul at Frankfort on the Main. The plant will take 2 years to complete, but initial production is expected by the middle of next year.

Having a planned capacity of 350,000 metric tons annually, the plant will cost 200,000,000 marks, cover an area of 2,000,000 square meters and employ 3,000 workers.

German production of synthetic gasoline in 1938 was reported to have reached 1,500,000 metric tons. In the same year, Germany imported 1,357,102 tons of gasoline.

Insulation and combustion engineers will be quick to recognize the care with which thermodynamic problems have been worked out in designing this refinery unit. First, the picture reflects the effort to conserve heat but beyond this, the picture reflects the exacting heat balances required in modern processing to bring about thermal reactions at the proper location. A difference of a few degrees in temperature might mean cracking the wrong fraction in the wrong place or combining the wrong two hydrocarbons. This installation was recently completed as a catalytic-cracking unit in a Buffalo N. Y., refinery

ENGINEERING & OPERATING

DECEMBER 7, 1939

In This Section

AUTOMATIC OPERATION TO FEATURE MAGNOLIA'S NEW EAST TEXAS BUTANE PIPE-LINE SYSTEM
By D. H. Stormont ..... Page 38

Several unusual features have been incorporated in planning the pumping stations and constructing the pipe line that is being layed by the Magnolia Petroleum Co. to bring butane and other light fractions from natural-gasoline plants and refineries in the East Texas area to the company's refinery at Beaumont, Tex., where it will be polymerized to make high-octane fuels.

ENGINEERS STUDY FULL EFFECT OF WATER FLOODING IN BRADFORD FIELD
By J. P. O'Donnell ..... Page 43

Using a property containing 50 acres and located in the center of the Bradford field of western Pennsylvania as a basis for drawing conclusions regarding the entire field, the economic results of water flooding may be traced. Also, the economic life of the field may be predicted.

SHELL OVERCOMES CAVING TO BRING IN COASTAL WELL
By Neil Williams ..... Page 55

By applying effective engineering practices to a great variety of cavings and other troubles encountered in drilling, the Shell Oil Co., Inc., was able to complete its No. 7 Conover Community in coastal Louisiana as a good oil producer.

SAFETY—Platform for Attaching Backside Pump ..... Page 46

OPERATING IDEAS ..... Page 49

PROGRESS IN METALS—Edited by Prof. W. L. Nelson ..... Page 50

QUESTIONS ON TECHNOLOGY—By C. K. Francis, Ph.D. ..... Page 59

Automatic Opera New East Texas

By D. H. STORMONT

CONSTRUCTION of a second pipe line for transporting the large volumes of natural gasoline and butanes produced in the East Texas field to Gulf Coast refineries has been completed. The new carrier was laid by Magnolia Pipe Line Co. and will handle the production of five East Texas plants, transporting their output to the company's large refinery at Beaumont, where the mixture will be used in the manufacture of high-octane gasolines. Although laying of the line has been finished, the carrier will not be placed in operation until after the first of the year due to delay in completion of the pumping stations. When completed, the initial station and a booster station will operate under a high degree of automatic control, with operation of the booster station synchronized to that of the initial station.

The new Magnolia carrier is made up of 182 miles or 4, 5, and 6-in. line, extending from a point near Kilgore in the East Texas field via Center, Francis, and Kirbyville to Beaumont. Between Kilgore and Center 50 miles of 5-in. line were laid; from Center to the Francis station, near Pineland, 38 miles of 4-in. were laid; below the booster station 8 miles of 6-in. were laid, with the remainder of the 85 miles of line between Francis and Beaumont being 4-in. In the East Texas field the gathering system laid to the five plants was composed of 4½ miles of 6-in., 9 miles of 4-in., and 7 miles of 3-in. The line was electric-welded throughout.

Pumping facilities at the two stations will consist of a vertical triplex variable-stroke plunger-type unit designed to pump 4,000 bbl. daily at a minimum suction pressure of 50 lb. and a discharge pressure of 850 lb. These pumps will be direct-driven by 75-hp. 900-r.p.m. 440-volt squirrel-cage motors of explosionproof design. The Kilgore and Francis stations are identical in layout except that at the former purchased electric power will be used, while at the Francis station power will be supplied by a gas-engine generator set. This will consist of a 165-hp. engine driving a 156-kva. three-

Top left: Ditching machine crossing roadway

Middle left and lower left: Welders and labor gang working on road crossing

Middle right: Cleaned and primed pipe on skids

Lower right: Many bends were required in rolling and densely wooded areas

Opposite page: Paint gang coating and wrapping the line with specially designed equipment

tion to Feature Magnolia's Butane Pipe-Line System

phase generator. To insure uninterrupted operation a standby-engine generator unit is to be provided at the Francis station.

The triplex variable-stroke pumps were chosen due to the high mechanical efficiency they offer when pumping a light-gravity variable fluid at high, constant pressures in varying volumes. Under normal operating conditions pumping a fluid approximating 61 gravity at about 850 lb. pressure, the pumps are expected to operate at 85 per cent mechanical efficiency. This is believed to be the first application of this type pump to pipe-line operation, although they have been used in other industries.

As stated, the notable features of the system will be the automatic pressure controls by which the speed and stroke of the pump at the initial station is regulated to conform with the load and the facility with which the booster station is synchronized with the Kilgore station. Also, auxiliary devices that make for safe and continuous operation will be of the latest types.

Variable Pump

At Kilgore the rate of transfer can be regulated by a Mason-Neilan control system, which controls the stroke of the pump and the rate of flow by merely setting an indicator hand at the desired rate of oil transmission. The controller will operate in conjunction with an orifice meter on downstream side of the pump, the differential pressure across the orifice plate (which is a function of the rate of flow) being used to regulate the stroke of the pump. If the rate of oil transmission should tend to fall below the rate at which the control hand is set, the corresponding drop in differential pressure immediately will cause the pump to increase its stroke, thus increasing the gallons pumped per minute. This control equipment not only will facilitate changing the rate of transmission, but also will make is possible to operate at a constant rate under changing conditions with a minimum of attention. To illustrate the ability of the system to meet changing conditions, the pump is expected to go from no stroke to full stroke in 10 seconds, or vice versa.

Safety precautions will include an automatic pressure bypass consisting of a relief valve set for maximum pressure and leading to a vent line. Blowout heads will be placed on the suction and discharge lines, which also will lead to the relief line. To prevent any vapor escaping from the vent line, a control pilot light will be placed at the end of the line to burn any escaping vapors.

Station Control

The Pineland booster station will have the same automatic controls and safety devices, excepting that a pressure controller will operate on the suction side of the pump in regulating its stroke. The control equipment will be adjusted to maintain a pressure of about 75 lb. at the intake side of the pump. If the pump at the Kilgore station should be operating at a faster rate than the Francis station, the additional fluid will build up a greater pressure at the intake of the Francis-station pump. The effect of the higher pressure would be to increase the pressure differential so that the pump would automatically increase its stroke, thereby discharging the gasoline at the same rate it is being received. In this manner the booster station is kept synchronized with the Kilgore station.

Greater efficiency of operation will be the chief advantage gained from this automatic controller arrangement. In addition will be the protection provided the pumps in case the gasoline supply is interrupted at a point above their intakes. Serious damage would soon result to the triplex pumps if a line break or similar accident should cause an interruption, but with this control system the drop in pressure at the intake manifolds will cause the motor to stop. Also, while slight differences in rates of transfer of the two stations could be cared for by means of a float tank at the booster station, the synchronization of the two stations does away with this added cost. It will also result in keeping the gasoline confined within the line until it reaches the Beaumont terminal, which, in view of the highly volatile nature of the butane-natural-gasoline mixture, is much to be desired.

Contract for laying the Kilgore-to-Francis station section and for laying the gathering system was let to T. R. Jones, pipe-line contractor of Dallas, Tex., while the Pineland-to-Beaumont section was laid by Sheehan Pipe Line Construction Co., of Tulsa. C. Hobson Dunn, of Dallas, strung the pipe, with both contractors doing their own welding. Construction of the line was started in the middle of August and was completed on October 26.

In laying the Kilgore-to-Pineland section the right-of-way was through rolling country, in many places thickly wooded, with the soil generally sandy. The Pineland-Beaumont section was laid through a densely wooded area, and as the new line parallels the company's crude-oil line it was usually impossible for the crew to blast stumps for fear of damaging the crude line. The most difficult section of the entire line was encountered in the 3-mile section adjacent to the Neches River near Beaumont. Here, due to the swampy nature of the land, it was impossible to use heavy equipment, so that practically all ditching, pipe stringing, cleaning, coating, and backfilling had to be done by hand. The line was laid entirely by the stovepipe method; that is, the method by which one joint at a time is added to the line, in contrast to the firing-line method where several joints are roll welded into one section and then added to the line.

Ditching Machines

In laying the north section four ditching machines were used, digging approximately 6,000 ft. of 26-in.-deep ditch per 16-hour day. One tractor and three men worked in advance of the welders, making all necessary bends and laying the pipe over the ditch. This crew was followed by a tractor and seven men who aligned the pipe for two welders who put on the first bead. Following alignment and tacking crew were four or five welders, depending on the size of the line, making all bellhole welds. Welding machines were of 200-amp. rating, mounted on tractor-drawn wagons. Due to the rolling nature of the terrain along the right-of-way, a great number of bends were needed.

On the lower section of the line, where practically all pipe laid was 4-in., two ditching machines were used, averaging about 5,000 ft. of 26-in.-deep ditch per 10-hour day. Practically the same line-up of crew was used, the tacking crew using two welding machines and the finishing crew four machines. These were truck-mounted.

After the line was welded a traveling-type cleaning and priming machine was run over it. This was followed by doping and wrapping, using a Johns-Manville doping and wrapping machine applying one wrapping of felt and one of kraft paper. The line was then lowered and tested.

The first natural gasoline-butane pipe-line outlet to the Gulf Coast, of course, was that placed in operation by Humble Oil & Refining Co. in July 1936. This 8-in. line, which has been in continuous operation since that date, was built with a capacity of about 11,000 bbl. daily, employing only one pump operating at 700 lb. pressure at the station near London in the East Texas field. Increased volumes of product available resulted in a midstation being installed at Hearne to in-

crease the line's capacity to 15,000 bbl. Then, in the latter part of 1937, the carrier's capacity was stepped up to about 20,000 bbl. by installation of two additional booster stations at midpoints between London and Hearne and between Hearne and Baytown.

Although East Texas natural-gasoline manufacturers were somewhat slow in realizing their loss in not recovering the large fractions of butane and lighter hydrocarbons present in East Texas gas, 10 of the field's 19 plants have remodeled their facilities to include the recovery of these fractions. As a result production of butane has grown from a very nominal amount at the first of 1936 to an average of 300,000 gal. daily in September of this year. Much of this growth is no doubt due to the pipe lines of the Gulf Coast, which assures the operators of a definite market outlet for this product that is constantly growing in importance. Otherwise, of course, they would have had to rely mainly on local uses for drilling and domestic sales.

Bureau of Mines Develops Pressure Core Barrel

A PRESSURE core barrel that cuts a core of the producing formation in an oil well and seals the core in an inner barrel while it is still at the bottom of the hole, has been developed by the Bureau of Mines in cooperation with the A.P.I.

The conventional method of coring productive-oil formations brings a specimen of the reservoir rock to the surface of the ground, but during the process the pressure in the core is reduced to the atmospheric level and the gas associated with the oil in the core expands and escapes. The expansion of the gas also drives part of the oil from the core. This loss of oil and gas from core specimens has greatly handicapped engineers in accurately estimating the fluid content of petroleum reservoirs.

The new core barrel is essentially a conventional core barrel with the addition of special valves at either end of an inner barrel and a mechanism for closing the valves while the barrel is at the bottom of the hole. Tests have been made in five different wells in which 17 cores were cut, two of which were cut and sealed at the pressure and temperature prevailing at the bottom of the drill hole. The pressure in the test wells ranged from approximately 1,000 to 2,700 lb. per sq. in. Although minor changes in the design of the barrel undoubtedly will be necessary to assure satisfactory operation in every respect, the tests indicate that a core barrel patterned after the present experimental barrel will recover cores under pressure.

Other important steps in the determination of the fluid content of reservoirs, including the control of the circulating medium and the regulation of pressure and temperature at the bottom of the well bore to eliminate contamination of the core by the drilling fluid during coring operations, have not been a part of the program thus far. The analysis of one core taken with the pressure core barrel indicates that there was a considerable amount of contamination of the core by drilling fluid. Although a satisfactory solution of the contamination problem does not appear insurmountable, the factors involved present many difficulties requiring much additional research and experimentation before cores can be taken that will be entirely satisfactory for estimating oil reserves.

A detailed description of the pressure core barrel with the aid of drawings, the coring procedure used in the field, the method and equipment for analyzing the cores, the analytical results thus far obtained, and suggestions of factors requiring special attention are given in Report of Investigations 3481 entitled, Bureau of Mines-A.P.I. Pressure Core Barrel (Progress Report on Its Design and Development), by D. B. Taliaferro and R. E. Heithecker of the bureau's petroleum-experiment station at Bartlesville, Okla. Copies of the report are available without charge upon request from the Bureau of Mines, Washington, D. C.

BOOKS

PETROLEUM REFINING AND MANUFACTURING PROCESSES. By Maxcine J. Japour. 310 pp. Los Angeles: Wetzel Publishing Co.

The object of this book, according to the introduction, is to offer in a brief way to the petroleum man some ideas on the fundamentals of the refinery industry, a general knowledge of all petroleum products, and the application of petroleum to various industries.

A.S.M.E. MECHNICAL CATALOG AND DIRECTORY. 494 pp. New York: American Society of Mechanical Engineers. $3.

This is the twenty-ninth annual issue of this volume, which is distributed to members of the society as part of their membership privileges. In its profusely illustrated catalog section, manufacturers describe machines, equipment, and materials that are of interest to mechanical engineers. This is followed by a directory which gives the user an index to all American manufacturers of metals and alloys, power-plant equipment, power transmissions, instruments, materials-handling apparatus, etc. A page-reference system provides easy access to any desired information.

Installation of two 6-in. meters at a station on a crude-oil pipe line, which made it possible to reduce the service investment and increase the efficiency

Engineers Study Full Effect of Water Flooding in Bradford

By J. P. O'DONNELL

THAT the Bradford field will still represent an oil reservoir of considerable magnitude after water flooding has passed, is evident from the study of a property that has just about reached the limit of its economic life as defined by present methods of production. This property, it is indicated, will have a residual oil content of 10,238 bbl. per acre or 56.2 per cent of the original. However, the residual saturation will be but 25 per cent.

This field is the world's outstanding example of stimulating oil production by the injection of water, a practice commonly referred to as water flooding. In recent years it has been producing from 37,000 to 49,000 bbl. per day, 95 per cent of which is being obtained from water-flooded properties. From its discovery in 1871, to 1938, inclusive, this field has produced 384,500,000 bbl. of oil and last year, despite the fact that it had been producing for 67 years and has been under curtailment of varying degrees for 7 months, it ranked tenth among all fields of the country in total production.

Early Development

Ten years after its discovery the field reached its peak of production when its output for the year totaled 22,945,000 bbl. in 1881. A quarter of a century later, in 1906, annual production had declined to about 2,000,000 bbl. Then the possibilities of water flooding were beginning to be recognized and in 1907 production began to increase. This increase continued until 1937 when the field reached a high of 16,738,688 bbl., an increase of 800 per cent from its low and only 27 per cent below its best natural production attained 46 years earlier. Production declined in 1938 but this was due to curtailment and not to the inability of the field to produce on a par with 1937.

As this field is the outstanding example of a method of crude-oil production that is becoming more widely adopted, the case history, both operating and economic, of one of its properties that is approaching its economic limit may furnish engineering data for water-flood development elsewhere. The development and equipping of a typical water-flood property were fully described in the January 23, 1936, issue of The Oil & Gas Journal, and details included in that article will be eliminated here.

This property was purchased by its present owners in June, 1929, and its development from the standpoint of drilling was completed in the latter part of that year and in early 1930. With its present production down to slightly more than a quarter of a barrel per well per day it is obvious that it has virtually exhausted its possibilities by water-flooding methods. This property is the most nearly average of a number for which complete records are obtainable. From its records the following additional conclusions are derived:

1. The life of this property, developed intensively, will be about 12 years. However, the actual life is of minor importance since most of the recoverable oil was obtained very early.

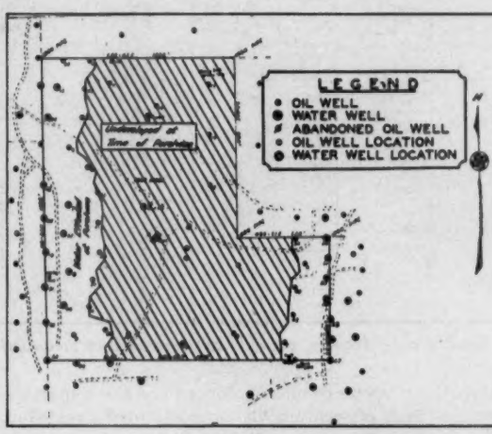


Fig. 1—Early development

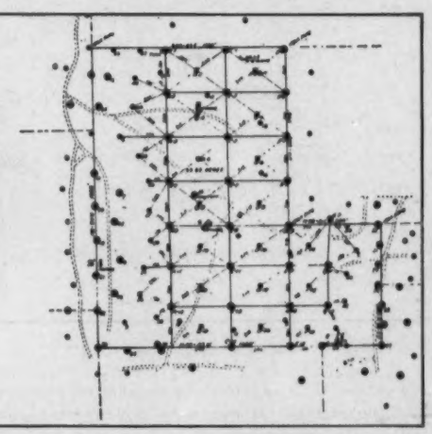


Fig. 2—Complete development

2. Eleven times as much water was injected as there was oil recovered and five times as much water was produced as oil. The volumetric efficiency of this operation, on the basis of barrels of water injected to barrels of oil produced, is 9 per cent.

3. With 98.5 per cent of the anticipated ultimate recovery already obtained, total recovery is estimated at 43 per cent of the original content. The total-recovery estimate applies only to that section of the property undeveloped at the time of purchase.

4. In the current decade the price of Bradford crude has averaged $2.2928 per bbl. against $3.6126 in the 1920's, a drop of $1.3198.

This property, consisting of 50.6 acres, is in Otto Township, McKean County, and is near the center of the Bradford field. Up to the time of purchase on June 1, 1929, it had been developed to

TABLE 1—WATER INJECTION AND PRODUCTION, OIL PRODUCTION RECORD

(Data in barrels)

Year—	Oil produced	Water produced	Water injected
1929	4,091.95	12,665	Unknown
1930	30,486.29	96,463	558,211
1931	101,125.01	41,776	427,613
1932	81,754.49	196,919	445,772
1933	34,285.70	203,677	351,064
1934	20,692.30	210,070	397,194
1935	13,521.80	211,099	358,465
1936	11,824.71	267,592	435,127
1937	7,954.49	182,523	253,185
1938	5,470.26	134,069	202,243
1939 (to 6-1)	1,863.24	41,896	75,219
Totals	313,070.24	1,598,749	3,504,093

TABLE 2—COMPARISON BY YEARS OF PAYOUT STATUS

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939 to June 1	Total
Acres developed	21.73	14.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,593
Water wells drilled	22	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	27
Oil wells drilled	4	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	16
Daily production, bbl.	1,977	8,352	27,705	22,337	9,393	5,669	3,705	3,231	2,179	1,499	1,234	8,589
Yearly production, bbl.	409,195	3,048,629	10,112,501	8,175,449	3,428,570	2,069,230	1,352,180	1,182,471	795,449	547,026	186,324	31,307,024
Investment—												
Payment on property	$59,502.81	$26,032.49	$33,470.34	$24,277.15	$34,571.15	$33,470.34	$31,506.74	$10,055.98	.....	.....	.....	$252,887.00
Development	104,292.98	56,617.05	162.83	—1,385.08	562.72	—10.08	—17.97	.....	—674.55	.....	153.28	159,701.18
Total	$163,795.79	$82,649.54	$33,633.17	$22,892.07	$35,133.87	$33,460.26	$31,488.77	$10,055.98	—$674.55	.....	$153.28	$412,588.18
Income—												
Production of oil	$14,983.20	$77,618.51	$203,082.42	$154,421.07	$61,960.01	$50,966.42	$29,542.54	$29,003.06	$20,690.12	$10,381.38	$3,650.14	$656,298.87
Miscellaneous	1,584.91	.....	377.56	262.01	72.31	48.61	32.49	722.29	466.23	164.06	67.59	3,798.06
Total	$16,568.11	$77,618.51	$203,459.98	$154,683.08	$62,032.32	$51,015.03	$29,575.03	$29,725.35	$21,156.35	$10,545.44	$3,717.73	$660,096.93
Expenses—												
Operating	$5,223.88	$18,118.74	$18,055.43	$21,655.12	$16,420.13	$14,991.98	$12,844.15	$21,580.32	$11,376.85	$3,960.68	$1,238.24	$145,465.52
Administrative	2,334.46	9,237.35	17,393.50	12,770.05	1,680.00	1,460.88	1,657.66	894.40	752.73	618.47	253.21	40,052.71
Interest paid	5,801.52	11,156.78	9,745.45	7,671.40	6,208.52	3,680.36	1,384.78	393.93	69.19	.....	.....	46,111.93
Total	$13,359.86	$38,512.87	$45,194.38	$42,096.57	$24,308.65	$20,133.22	$15,886.59	$22,868.65	$12,198.77	$4,579.15	$1,491.45	$240,630.16
Net income from operations	$3,208.25	$39,105.64	$158,265.60	$112,586.51	$37,723.67	$30,881.81	$13,688.44	$6,856.70	$8,957.58	$5,966.29	$2,226.28	$419,466.77
Depletion and depreciation	3,611.72	43,142.59	151,948.21	114,908.84	48,416.71	42,469.68	7,741.12	224.15	1,256.19	546.17	184.47	414,449.85
Net profit	—403.47	—4,036.95	6,317.39	—2,323.33	—10,693.04	—11,587.87	5,947.32	6,632.55	7,701.39	5,420.12	2,041.81	5,016.92
Operating cost per barrel	1.2766	.5943	.1785	.2649	.4789	.7245	.9499	1.8251	1.4302	.7240	.6646	.4046

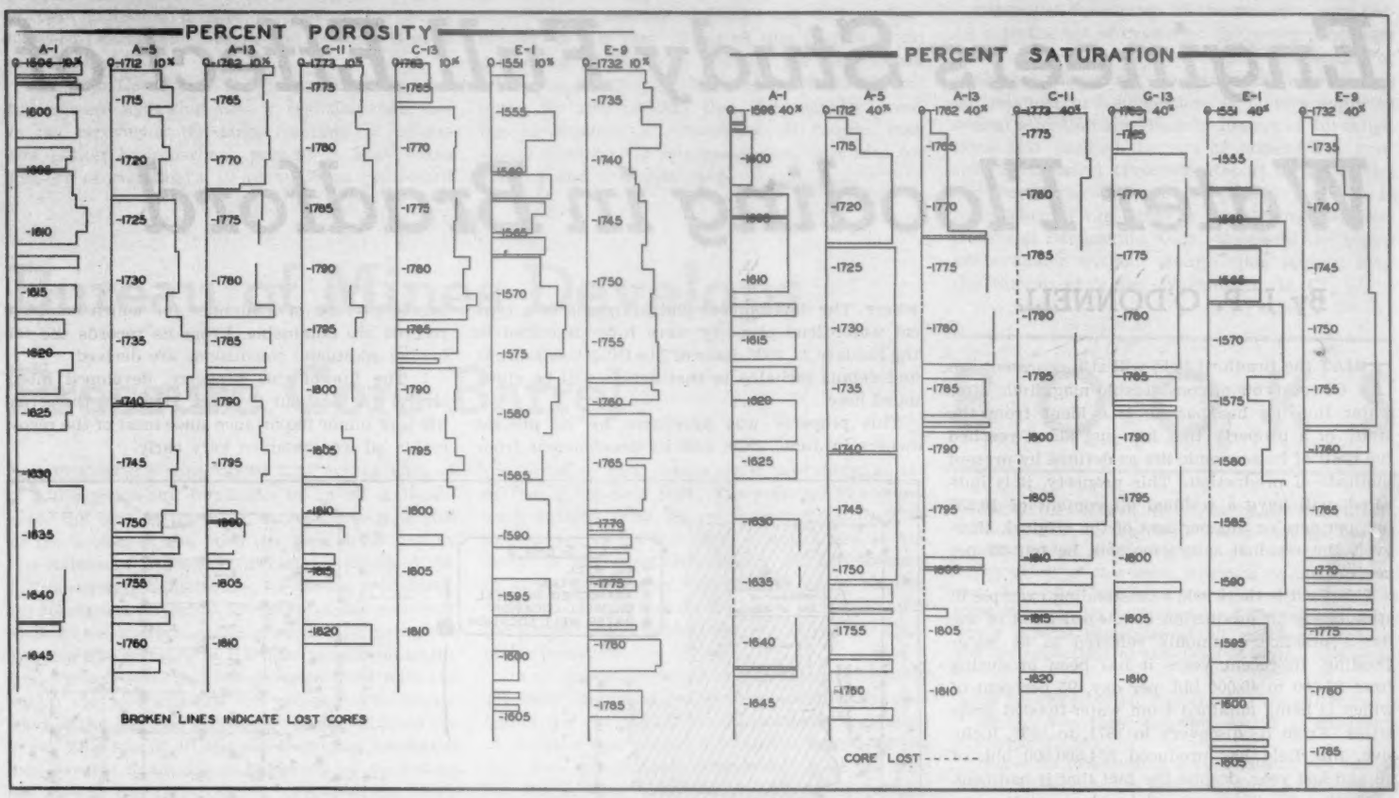


Fig. 3 and 4—Showing porosity and saturation of producing sand

the extent of 29 oil wells and 20 water-intake wells and the erection of necessary powers and water plant. In aggregate, 14.67 acres had been developed. The remaining 35.93 acres were developed in the last half of 1929 and in the first half of 1930 by drilling 27 water-intake wells and 16 oil-producing wells, with an average depth of 1,749 ft. Accompanying diagrams show the property at time of purchase (Fig. 1) and at the completion of development (Fig. 2). It will be noticed how a fairly regular five-spot pattern was followed in the section undeveloped at time of purchase.

In the course of dvelopment 7 wells were cored. At the time these cores were taken the permeability factor had not yet been recognized and therefore the analysis was limited to saturation and porosity. The percentage of saturation of these cores is shown in Fig. 4 and of porosity in Fig. 3. The wells cored, the oil content of sand calculated from porosity and saturation determinations, the top of the sand and the total depth of the wells are given in table:

Well—	Oil content bbl. per acre	Top of sand	Total depth
No. 1-A	12,243	1,596	1,646
No. 5-A	24,010	1,712	1,763
No. 13-A	13,995	1,762	1,807
No. 11-C	19,268	1,773	1,821½
No. 13-C	18,498	1,763	1,810
No. 1-E	17,025	1,551	1,610
No. 9-E	22,627	1,732	1,786
Average	18,238	1,698	1,749

Since these wells were drilled in different sections of the property their average content could be regarded as a fairly close approximation of the content per acre of the property. Further, since the saturation in none of these was believed to have been affected favorably by development on adjacent properties they present an accurate picture of the section developed subsequent to purchase.

Life of Property

A relatively unimportant figure in the discussion of water-flood properties is the actual life. This is because of the fact that during the first 5 years of development from 80 to 90 per cent of the recoverable oil is produced and the remaining 10 to 20 per cent may be produced over a period of from 5 to 10 years. The principal controlling factor in the ultimate life of such a property is the price of crude which, after the production has dropped to an average of a fraction of a barrel per well per day, will, if high, prolong the life and, if low, will shorten it.

In the property under consideration, results of the intensive flood were apparent in 1930. During that and the subsequent 4 years, a total of 268,340.79 bbl. of crude oil (see Column 1, Table 1) were produced. This was 85 per cent of the total recovery from June 1929 to May 31, 1939. With production during the first 5 months of this year down to 0.27 of a barrel per well per day and dropping, it is obvious that the life of the property will not extend much into the future.

Water Injection—Oil Production

Metering of water injected began on this property in 1930. Since the ratio of water injected to oil produced is comparatively large in the very early life of a flood, the absence of data prior to that will affect the totals to some degree. However, a majority of the water wells were drilled in late 1929 and early 1930 so that most of the water injected is included in Column 2, Table 1. This shows that from the time metering began to the end of May 1939, a total of 3,504,093 bbl. of water had been injected. During the same period a total of 308,978.69 bbl. of oil had been produced. This gives a ratio of water injected to oil produced of 11.3 to 1 or a volumetric efficiency of 9 per cent.

Water production records from the time of the purchase of the property are available. During this period 1,598,743 bbl. of water were produced with the oil. The ratio of water produced to oil produced is slightly above 5 to 1.

The ultimate recovery on this property was estimated originally at 7,000 bbl. per acre on the basis of the anlysis of the seven cores. These cores showed a sand thickness averaging 47.4 ft., 86 per cent of which was saturated with oil ranging from a low of 8 per cent to a high of 65 per cent or an overall average of 44.8 per cent. The porosity ranged from a low of 4.5 per cent to a high of 17.25 per cent.

With an average oil content of 18,238 bbl. per acre, the section undeveloped at time of purchase, 35.93 acres, had an estimated total content of 655,291 bbl. To June 1 of this year this section had produced 282,733 bbl. and its ultimate recovery is estimated at 287,440 bbl. This would make the ultimate recovery 43.8 per cent of the original content of the area undeveloped at the time of acquisition, or approximately 8,000 bbl. per acre instead of the 7,000 bbl. originally estimated.

A recovery of 8,000 bbl. per acre or 43.8 per cent would leave a residual content of 10,238 bbl. per acre or 56.2 per cent. This percentage of the original saturation would make the residual saturation 25 per cent.

The residual saturation of 25 per cent is very close to the commonly accepted minimum under which water flooding as commonly practiced has been found to be impractical in the Bradford field. This figure, within one or two percentage points, has been borne out both in other water floods and by laboratory conclusions.

The cost of this property approximated $5,000

TABLE 3—PROPERTY AREA, PRODUCTION RECORD

	Acres
Total area	50.60
Partially flooded at purchase	14.67
Acreage developed by present owner	35.93
	Bbl.
Produced from entire property to 6/1/39	313,070
Estimated future production	4,707
Estimated ultimate recovery	317,777
Produced from entire property to 6/1/39	313,070
Produced from area flooded at acquisition	30,337
Produced from area developed since acquisition	282,733
	Bbl. per acre
Recovery to date from area developed since purchase (282,733÷35.93)	7,869
Estimated future recovery of same	131
Estimated ultimate recovery of same	8,000

A New Feature ... THAT ADDS TO THE UTILITY OF NATIONAL GEARED POWERS

NATIONAL Geared Pumping Powers are now made with five adjustable stroke positions. This provision, to meet changing field requirements, has been accomplished without adding to crank overhang.

Capacity for all central power requirements is offered by the complete National Geared Power Line.

BRIEF SPECIFICATIONS

TYPES	G-30-B	G-50-B	G-75-B	G-100-B	G-150-B
Nominal hp rating at 20 spm	30	54	75	91	144
Peak Torque rating 20 spm inch lbs.	150,000	270,000	371,000	452,000	714,500
Stroke Length Maximum	24	30	32	36	40
Stroke Length Minimum	18	22	24	26	30
Connection Holes	20	20	20	20	24

NATIONAL

THE NATIONAL SUPPLY COMPANY

EXECUTIVE OFFICES: PITTSBURGH, PA. DIVISION OFFICES: FT. WORTH, TEXAS; TULSA, OKLA.; TORRANCE, CALIF. GENERAL SALES OFFICE: TOLEDO, OHIO

per acre which is regarded as high despite the high potential recovery indicated by the core analyses. However, the property was purchased in 1929 and the average price of Bradford crude in the decade ending that year was $3.6126 per bbl. Had that price maintained through the subsequent decade, the property would have returned a profit of more than $400,000 instead of an actual profit of $5,016.92. Included in the apparent high cost was that of development prior to acquisition of the property by its present owners.

Development Costs

Development costs totaled $159,701.18. Approximately two-thirds of this cost was devoted to drilling and equipping wells: 27 water wells at $2,250 each and 16 oil wells at $2,750 each. Other principal costs were operating which totaled $145,465.52, an average of 46.46 cents per bbl of oil produced; administrative, $49,052.71, an average of 15.67 cents per bbl., and interest, $46,111.93, an average of 14.73 cents per bbl. Total costs were $655,080.01 and the gross revenue was $660,096.93, leaving a net profit of $5,016.92.

Two factors stand out prominently in the financial summary. Sixty per cent of the production came in 1931-2-3 when the price of crude averaged only $1.92 per bbl. Had the peak been reached prior to or subsequent to that period, the realization would have been greater. Another interesting fact is that while operating costs in 1936-7 were very near the highest in the life of the property, the net return was the greatest in those 2 years. Operating costs rose because of an extended trial of high pressures which resulted in water-line breaks and increased pulling. However, the price of crude was at its peak for the decade then, averaging $2.52 per bbl., and profits were up despite the greater costs.

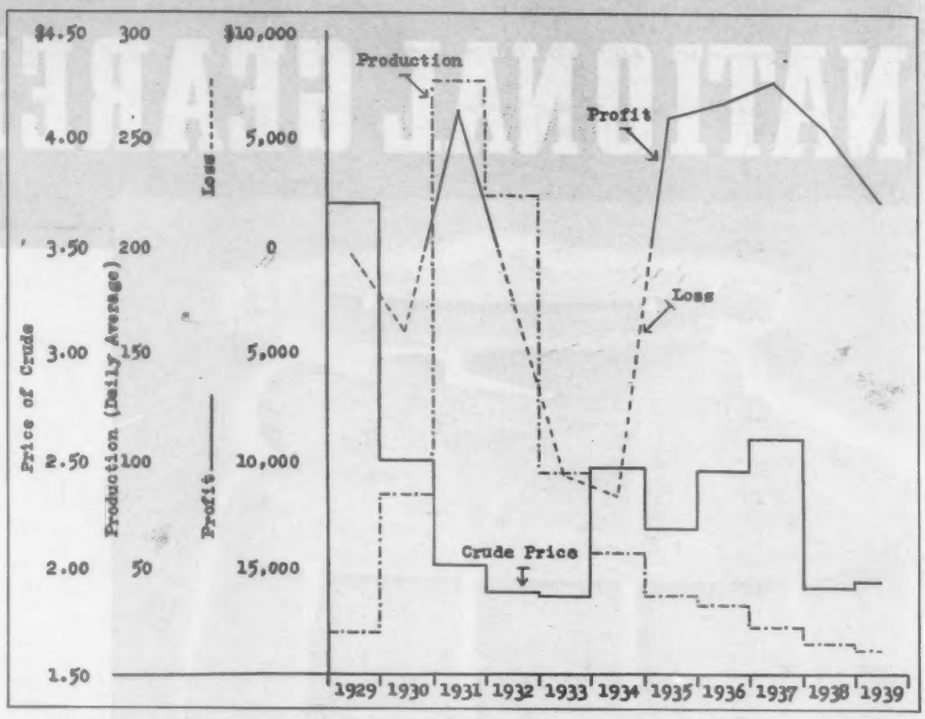


Fig. 5—Trend of economic factors during past 10 years

If this property can be regarded as typical of the Bradford field, the following assumptions, based on this review, may be taken: (1) The price of crude oil during the "depression decade" dropped water-flood operations in this field definitely into the marginal class; (2) that water flooding, while it made continued operation of this field possible, is an inefficient though effective method of operation; (3) that, because of this inefficiency, the field will still represent an oil reservoir of some magnitude after production by present methods of water flooding has been exhausted.

SAFETY — Platform for Attaching Backside Pump

ACCIDENTS in the petroleum industry have been on the decline for the past 10 years due to the better equipment manufactured, better supervision and the elimination of physical hazards. The latter not only includes the proper guarding of potentially dangerous equipment but the establishment of safe working practices and conditions. The platform above is an example of what has been done by many companies to make a particular task safer and at the same time earier.

Backside cranking has become more common throughout pumping areas and now a variety of hookups are in use. This particular installation is on an old standard rig with an extra pitman being placed on the bandwheel shaft. The backside arrangement can handle one or several wells, depending on their location, depth, and other factors.

If pumping of a well by the backside method is discontinued for a short time only the rod line and jack can be disconnected by a conventional knockoff block. (Not shown in picture.) If the well is going to be down for a more than a few hours, the backside attachment can be removed from the pitman, as this practice prevents wear of the bearings on the stroke post as well as the rod line; it also reduces the load on the engine.

Removal or installation of the backside attachment is not difficult with a proper platform but it becomes a strenuous and often dangerous task when no platform is present. When a man is in an odd position and is lifting a heavy weight, any number of injuries may occur. Use of boxes to make a platform or an inadequate ladder is also dangerous as a fall while lifting a weight is apt to result in serious injury to the workman.

On the platform above, the workman can install the backside attachment in a few moments after the pitman has stopped moving. He simply has to slip the bearing over the pitman pin on one end and then insert the pin in the stirrup and bearing on the stroke post.

Cost of the safety installation is not great and is paid for by the saving in time.

Announcing:

THE NEW "OILWELL" TC-17

TWIN-CRANK PUMPING UNIT

THE "Oilwell" TC-17 Pumping Unit provides true operating economy not only on the day of its installation but also for many years after its initial cost has been paid in trouble-free production. It is sturdily built and has all of the quality features that are usually found only in larger units intended for deep-well use.

Here are a *few* of its *main* features:

Skid-type, structural-steel base, short or extended, providing clearance for the cranks even when fully counterbalanced.

Rigid, derrick-type samson post with *machined* platform for the *machined* bases of the saddle-bearing housings.

Single-helical, fully heat-treated steel gearing (double-reduction).

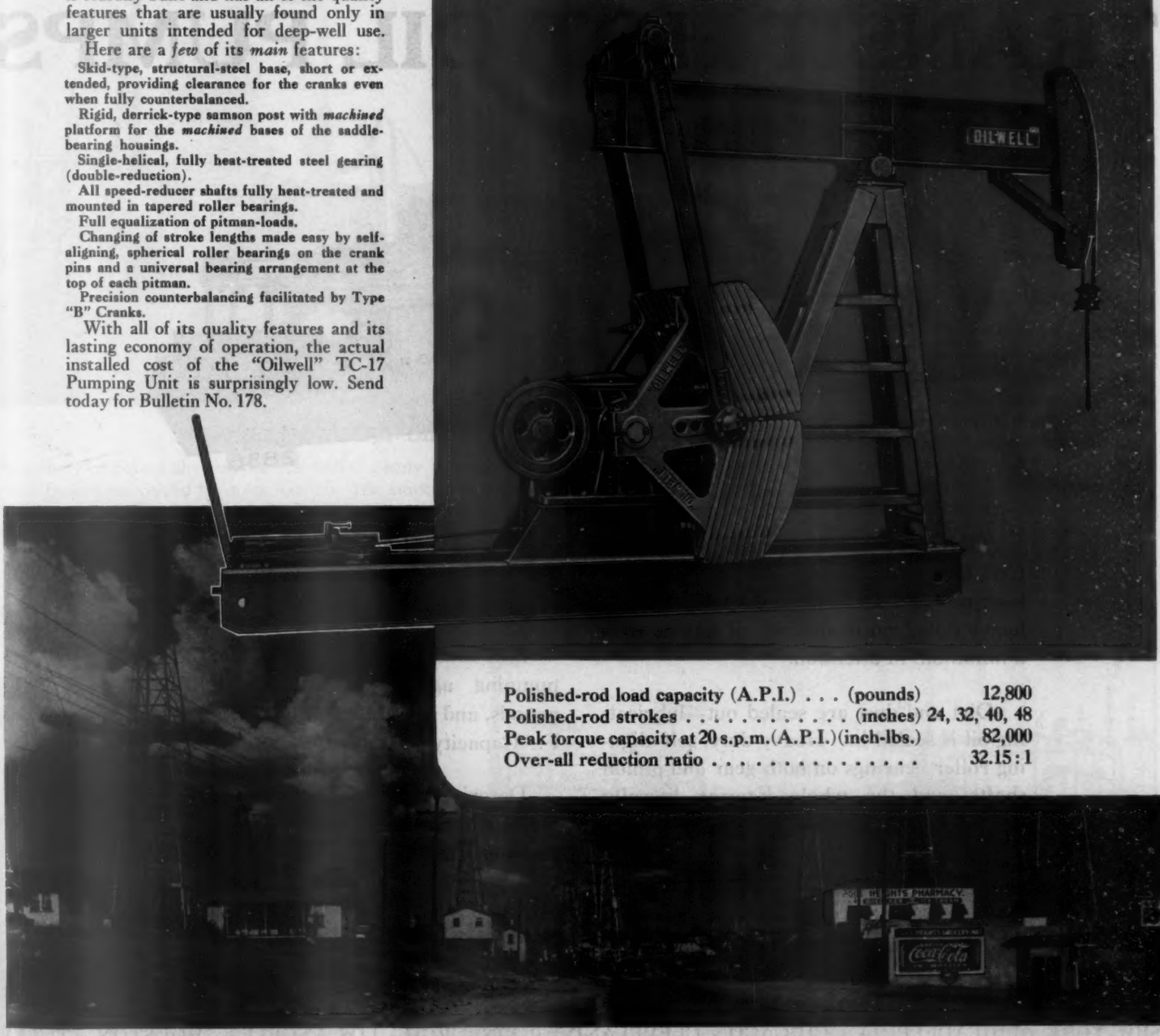
All speed-reducer shafts fully heat-treated and mounted in tapered roller bearings.

Full equalization of pitman-loads.

Changing of stroke lengths made easy by self-aligning, spherical roller bearings on the crank pins and a universal bearing arrangement at the top of each pitman.

Precision counterbalancing facilitated by Type "B" Cranks.

With all of its quality features and its lasting economy of operation, the actual installed cost of the "Oilwell" TC-17 Pumping Unit is surprisingly low. Send today for Bulletin No. 178.



Polished-rod load capacity (A.P.I.) . . . (pounds)	**12,800**
Polished-rod strokes . . . . . (inches)	**24, 32, 40, 48**
Peak torque capacity at 20 s.p.m. (A.P.I.) (inch-lbs.)	**82,000**
Over-all reduction ratio	**32.15 : 1**

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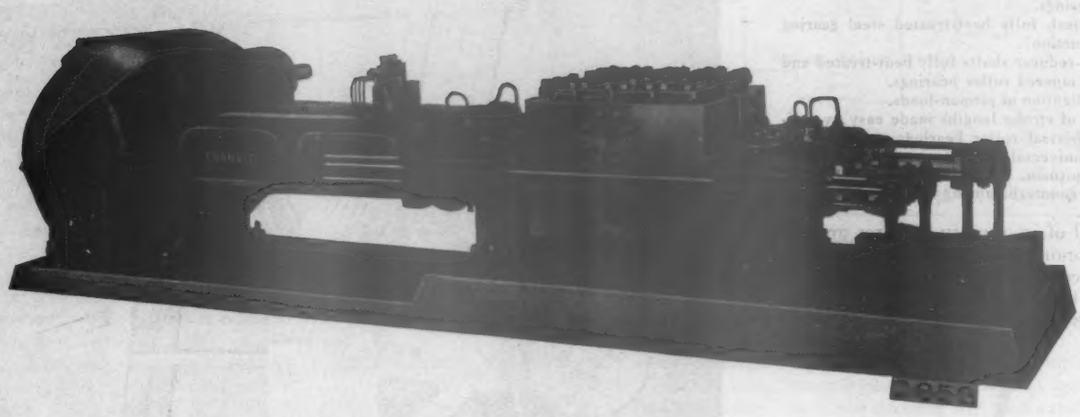
OIL WELL SUPPLY COMPANY

Subsidiary of United States Steel Corporation

ENCLOSED POWER ENDS TRANSIT HOT OIL PUMPS



TRANSIT duplex forged steel "Hot Oil" liquid end, fitted with new enclosed type power end. This is a unit built for heavy duty, continuous hot oil service with a minimum of attention.

Dirt and dust are sealed out—lubricating oil is sealed in. Heavy duty, self-aligning roller bearings on both gear and pinion shafts, and the whole interior literally flooded with lubricating oil.

Forged steel liquid cylinders, with integral stuffing boxes, water jacketed. Plungers, water cooled.

Size illustrated above is a 4¼ x 12″, for pumping against pressures up to 700 pounds, and liquid temperatures up to 800° F. Capacity 160 gallons per minute.

Description of other sizes of this type on request.

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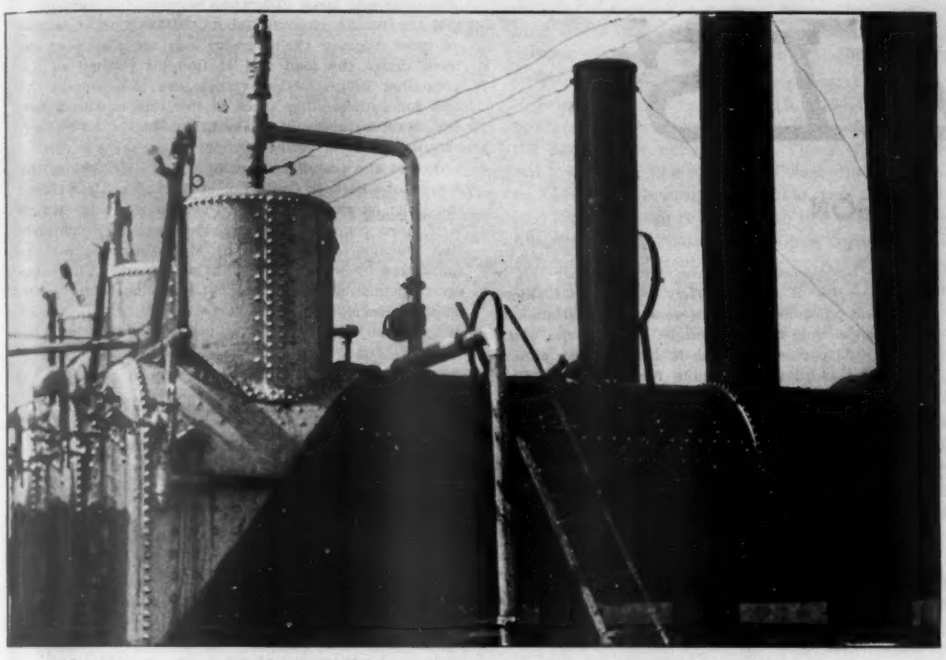
Operating Ideas



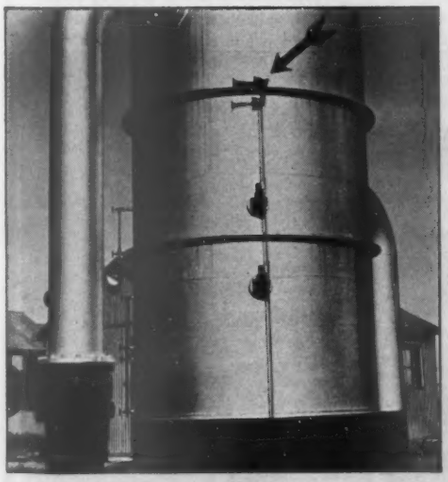
Holders for Boiler Smokestacks

The battery of boilers shown here has drilled nearly 60 wells in Illinois during the past 2½ years; boilers are rigged for quick moving. The stacks are stubbed and are hinged in back. When it comes times to move the boilers, the guy wires are loosened and one bolt removed from the bottom of the stack. The stacks are then pulled over and rest on the bottom half of the hoops; the top half holds them in place.

Telephone at Drilling Rig

In a number of California fields where development is concentrated, operators make a practice of having a telephone installed at each drilling well. This makes it possible for the driller to keep in touch with headquarters. In emergencies replacement parts can be procured quickly. At the completion of each tour, the well log is reported over the telephone to the office. A loud siren is installed with the telephone to signal to the crew when it is being called.

Switches on Scrubber Prevent Damage to Compressors



Danger of a slug of fluid entering the compressors in a combination gasoline plant and repressuring project is eliminated by two switches controlled by the fluid level. Whenever the fluid level approaches the danger point, it completes an electrical circuit which starts the horn (shown by arrow) blowing and shuts down the compressor

Transformers Mounted on Trailers

Portable transformers are used in southern California oil fields where electric power operates drilling and pumping equipment. These transformers are mounted on four-wheel trailers that may be moved quickly from one location to another to meet the operating requirements.

Progress in METALS

By W. L. NELSON

Stress-Relieving Refinery Pressure Vessels

UNDER Paragraph V-68 of the A.S.M.E. code for unfired pressure vessels, it is specified that the completed vessel shall be stress-relieved by firing in a furnace and that all welding must be examined radiographically. The requirement of stress relieving is a big order, because of the enormous size of some vessels. The accompanying picture indicates the enormity of stress-relieving furnaces and the cost of manufacturing Class A pressure vessels.

The furnace is owned by the Chicago Bridge & Iron Co. and is situated in the Birmingham, Ala., plant of that company. It is 80 ft. long, 14 ft. wide, and 17 ft. 4 in. high on the inside. Vessels are wheeled into the furnace on a 28-wheel car, which is 33 ft. long; and longer vessels can be handled by allowing first one end and then the other to stick out of the furnace.

The furnace is fired with coke-oven gas through 64 burners, which are grouped into 12 groups or zones so that a uniform temperature can be maintained at all points. The temperature is controlled automatically. The maximum furnace temperature is about 2,000° F.

Comparison of the Hardness or Strength of Alloy Steels

ALTHOUGH all alloy elements do not affect a steel in exactly the same manner, a rough-and-ready empirical comparison of alloy steels is given in "Bethlehem Alloy and Special Steels" by D. K. Bullens (1935). The method should be applied to steels that are in the same condition of heat-treatment, and is most exact when used to compare a series of steels which all contain the same elements but in variable amounts. The percentage of each element is multiplied by the following empirical factor, and usually the larger the sum of the products, the stronger the steel.

Phosphorus	40
Carbon	30
Vanadium	20
Molybdenum	10
Manganese	8
Chromium	5
Silicon	5
Tungsten	4
Nickel	4
Copper	4

Burns, Moore and Archer (Am. Soc. for Metals, Preprint 5, Oct. 1937) estimate the degree of hardening attained by quenching, in the same manner but by another series of factors. They assume that silicon, sulfur and phosphorous are present in normal amounts but suggest that a correction be made if the sulfur exceeds 0.03 per cent because it decreases the amount of manganese that is available for hardening. They suggest using

Carbon	1,000
Manganese	400
Chromium	500
Nickel	100
Copper	100

However, a comparison of hardening or strengthening alone is not entirely fair because some elements lend ductility as well as strength, others add to the wearing qualities, and many factors become of importance for particular services. In addition, certain extras must be added to the metal costs given above for special handling, increased costs of rolling, etc.

High-Strength Construction Chain in Oil-Field Service

Ordinary plain link chain is used extensively in general construction work and in moving heavy equipment. A common material for this purpose, other than plain carbon steel, is 3.5 per cent nickel steel. A 3.5 per cent nickel steel containing about 0.23 per cent carbon (S.A.E. 2325) will develop a tensile strength of about 125,000 lb. per sq. in., an elongation of 15 or more per cent (2-in. specimen) and a Brinell hardness of about 245 when quenched from 1,425° F. in oil and tempered (or drawn) to about 950° F. In addition, such an alloy can easily be heat-treated and welded. The relatively large difference between the yield-point and the tensile strength (about 20,000 p.p.s.i.) is also an asset because the operator can see the links deform under the load and is thereby warned of approaching failure. Nickel steels are also among the best for withstanding shock at low temperatures. Several manufacturers of chain utilize nickel alloy steel or alloy steels of similar properties.

One of the manufacturers of nickel steel chain, the American Chain & Cable Co. at York, Pa., is welding the links on the end rather than on the side—which is a more common practice. This company contends that damage to the chain by sharp corners, etc., is minimized by welding the links at the end. The same company manufactures a monel metal chain for withstanding corrosion, particularly "pickling" operations in the steel industry.

Metallurgical Terms

Killed and Rimmed Steels

These steels are defined from a questionnaire studied by Leon Guillet as "Killed steel is that steel to which has been added after it has been fabricated, the deoxidizers necessary to cause it to solidify quietly without evolution of gases. These additions may be effected in the furnace, in the ladle, or in the mold."

Semi-killed steel is similar except that less deoxidizer is added and rimmed steel has had no deoxidizers added. Thus, rimming steel, also called effervescing steel, evolves a large volume of gas during solidification.

From the standpoint of the user, the properties of the finished steels are of primary interest. Killed steels have a greater creep resistance and hence are used widely for tubes and shells used at high temperatures. Although the rimming steels are not homogeneous and show a tendency to become brittle with age, they are adapted to deep-drawing operations (lack of silicon) and they are easily welded.

Cleaning Pipe Lines With Welded Scrapers

THE cleaning of dirt from the interior of a pipe line is an awkward job. Certainly the cost of digging up the line is prohibitive in most instances. One method of cleaning relatively long lines is the use of scarifiers or "go-devils." These consist of a cylindrical body or a short rod having radial arms of blades which scrape the interior of the pipe, and a flexible gasket-like plate on one end which extends to the wall of the pipe so that gas pressure can be used to propel the scarifier through the line.

The scarifiers that were built by welding and hard facing are shown in Figs. 1 and 2. The "go-devil" shown in Fig. 1 is used for dislodging hard-caked dust and oil mud in a 24-in. line, and the type shown in Fig. 2 is used primarily for cleaning. Both of these scarifiers were constructed from pipe by welding and by hard facing the tips of the scarifiers or fingers with Haynes Stellite. The holes in bull-plug permit some gas to blow through and carry loose accumulations through the pipe. The diaphragm was made from a heavy ditching-machine conveyor belt backed by a third circular sheet of steel.

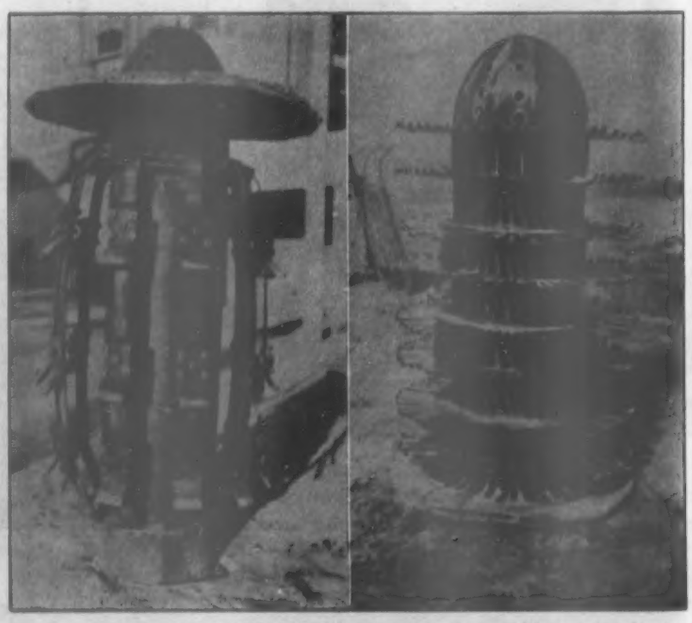


Fig. 1—(Left) Scarifier for dislodging dirt and mud. Fig. 2—(Right) Cleaner having hard-faced steel fingers

hole, a salt-water flow broke in. This flow was killed when, with the preventer closed 9½ lbs. mud was pumped into the hole. Full circulation was established for short periods as substantial quantities of mica flakes and Aquagel were added to the mud but these could not be maintained. Eighty sacks of rice bran and 21 tons of sawdust also were pumped in at this time without results, after which drilling was resumed with water and without any mud being pumped.

Lose Worn Cutters

Drilling with a rock bit, hole was deepened in this way from 5,173 ft. to 5,199 ft. in hard sand and lime formation, where in coming out to change bits three worn cutters were left in the hole. An attempt first was made to drill past these with another rock bit but this failed, and following this five runs with a bailer failed to recover the cutters. At the same time the hole bridged to 5,117 ft., and it was necessary to ream this out, a number of attempts being made before the hole was again open to bottom. In this, a salt-water flow again broke in, and a full pit of mud was pumped in before the flow could be stopped. Running a 5¾-in. finger basket, the hole again bridged back to 5,117 ft., and again had to be reamed down. Running a 5¾ by 6⅛-in. finger basket, one cone was recovered, but in coming out of the hole salt water again broke in. This was killed after the well was closed and an additional 100 bbl. of mud was pumped in.

Running a 6¾-in. rock bit, the hole was reamed from 5,099-5,199 ft. and deepened to 5,202 ft. in hard sandy limestone, where drill pipe hung up. Operators succeeded, however, in rotating this out through the tight places and bridges with difficulty. Changing the bit to a 4¾-in. rotary shoe, the hole was washed down to bottom. Pulling back to 5,180 ft., the pipe was worked and rotated while a cement batch of 60 sacks of cement with two sacks of Aquagel was pumped into the cavity. Pipe was pulled up to 4,100 ft. while cement set 7 hours.

Back down, top of plug was found at 5,163 ft. Unable to pump, it was found that the bottom 19 joints of drill pipe were filled with cement. These joints were replaced and with bottom of string at 5,070 ft., 100 more sacks of cement with 20 per cent Aquagel by weight was pumped in. Going back in after cement was allowed to set, top of cement was found at 5,078 ft., but cement broke through at 5,081 ft. The hole was washed down to 5,125 ft., where hard cement was drilled to 5,172 ft. Losing returns, a trip was made to run a cement retainer, which was set at 5,042 ft., and through which another batch of 600 sacks of cement with 7 sacks of Aguagel was pumped in. Circulation was reversed and cementing finished. With cement-retainer circulation jars closed, a mixture of 150 sacks of cement and 7 sacks of Aguagel was pumped through the retainer at 5,042 ft. with no pressure. Finishing, pressure built up to 500 lb. but gradually leaked off.

Circulation jars were backed off and a 6¾-in. rock bit run in, drilling out cement retainer. Hole was open to 5,082 ft. but hard cement was drilled to 5,155 ft. Losing returns, 500 empty gunny sacks and 6 bales of Fibrotex were pumped into the open hole. Pump pressure built up momentarily to 1,000 lb. when the plug went in but fell to zero, and the hole again started taking fluid. Five hundred empty mica sacks then were put into the casing and pumped down. Again pressure built up momentarily but quickly dropped off, and 430 more empty gunny sacks were added, following which a mixture of 300 sacks of quick-setting cement and 7½ sacks of Aquagel was pumped. The sack and cement plug was displaced to bottom, and pressure built up to 1,700 lb.

Drilling out, soft cement was drilled at 4,900-5,050 ft. and hard cement from there to bottom at 5,202 ft. Returns were lost for 5 minutes at 5,165 ft. but with circulation again established drilling continued, and the hole deepened to 5,208 ft., where another cavity was encountered, and returns were lost. After pumping 100 bbl. additional mud and failing to get returns, 1,614 dry cloth sacks were placed in the 7⅝-in. casing and 185 sacks of cement was pumped in on top. Pressure built up to 2,300 bl. and it was necessary to stop mixing cement and use a third Halliburton pump to get the plug down.

Going back in the hole, with a fish-tail bit, cement was drilled from 4,000 ft. to 4,845 ft., where the sacks were encountered. These were drilled out to 4,888 ft. The sacks then were pumped down to 5,114 ft., following which hole was reamed out to 5,188 ft., where returns were lost. With the bit plugged by sack material, pipe was pulled, and the fish-tail was replaced with a rock bit. Starting back in, the hole was found bridged with cement sacks at 3,030 ft. After considerable difficulty, in which it was necessary to run a sawtooth rotary shoe to cut out the cement-sack bridge, the hole was cleaned out to bottom at 5,208 ft. but again circulation was lost. With the preventer closed, mud carrying large quantities of sacking was pumped against the formation, and pressure built up to 1,200 lb. quickly, following which a mixture of 160 sacks of quick-setting cement and six sacks of Aquagel was pumped to bottom. Allowed to set, the cement, topped at 4,900 ft., was drilled out to 5,208 ft., the bottom of the hole. Drilling deeper, returns again were lost at 5,214 ft., but after 42 bales of Fibrotex were pumped into the hole, they were reestablished and drilling continued.

More Mud Pumped In

At 5,262 ft., the hole again began taking mud. 162 more bales of Fibrotex were pumped in and all available mud was used up without establishing returns. A mixture of 300 sacks of quick-setting cement and 6 sacks of Aquagel was pumped into hole. Top of this plug was found at 4,859 ft., and cement was drilled to 5,253 ft. No cement was found from there to bottom. Attempting to drill deeper, and getting to 5,264 ft., returns again were lost, and after pulling pipe and replacing the bit with a rotary shoe, 50 sacks of gypsum cement were pumped in. Running a rock bit, this cement was drilled through from 5,067-5,224 ft., with no cement being found from there to bottom. In an attempt to run another batch of gypsum cement, the cement set in 18 minutes while being displaced, sticking the drill pipe.

The pipe was backed off at the safety joint leaving 7 joints (210 ft.) in the hole. With a reversing tool and overshot, the top joint with part of the safety joint was backed off without trouble. Running eight joints of 5⅞-in. wash pipe, the hole was washed down around the stuck pipe, and to a depth of 5,082 ft., or 15 ft. below the bottom of the stuck drill pipe. Top of the gypsum cement was found at 5,042 ft. Pulling the wash pipe and running a plain-end pipe, which was screwed into the top of the fish, the fish was readily recovered in one run. The six joints were found full of cement and had to be replaced with new pipe.

Break Through

In drilling out with rock bit, bottom of cement broke through at 5,212 ft. Reaming the remainder of the hole to bottom and deepening to 5,273 ft., returns again were lost. Another cement batch, consisting of a mixture of 200 sacks of cement with four sacks of Aguagel, was pumped into the cavity, top of the cement coming to 5,083 ft. This was drilled and washed out to bottom of the hole, where partial returns were established, and drilling was resumed. Fifty bales of Fibrotex and additional Aquagel was mixed into the mud but this failed to effect complete returns. At 5,364 ft., 1,100 bbl. of mud was lost in 24 hours and another 100 bales of Fibrotex was pumped, getting only partial returns. At 5,375 ft., entire returns were lost, and an additional 45 bales of Fibrotex and 42 sacks of Aquagel were mixed. Regaining partial returns, the hole was drilled 4 feet deeper to 5,379 ft., where returns again were lost completely. This time 300 sacks of cement in a mixture containing three sacks of Aquagel was pumped, and displaced, assuming 6¾-in. hole from the 7⅝-in. casing to bottom. Drilling out, the hole was deepened another three feet to 5,381 ft., where returns again were lost. A cement retainer then was run and set at 5,045 ft., and a six-stage cement job undertaken, a total of approximately 300 sacks of cement, with varying proportions of Aquagel being pumped into the hole.

Hard cement was drilled to 5,182 ft. when returns again were lost. After mixing in 50 bales of Fibrotex with the mud, partial returns were restored. At 5,202 ft. in cement, all returns were lost. With cement retainer set at 5,044 ft., another cement job was undertaken, this being completed in four stages, using a total of 250 sacks of cement with varying proportions of Aquagel as before. On the final stage, a pressure of 3,000 lb. was built up. Circulation then was reversed, after which the retainer was released and pulled. While cement was being drilled out, the hole again started taking mud, and from 5,174 ft. to bottom was drilled with partial or no returns. At 5,202 ft., 14 bales of Fibro-

Shell Oil Co., Inc.'s No. 7 Conover Community, Jennings field, coastal Louisiana, showing mud pump hookup and portion of mud system

tex were mixed, and at 5,377 ft. 59 more bales were added, both times without effective results.

Continuing drilling without complete returns, a 12-ft. cavity was encountered at 5,382-94 ft., and all returns were lost, following which the well started flowing salt water with an odor of H_2S. Still flowing salt water, the hole was drilled to 5,625 ft. where an attempt was made to displace the salt water with 9½-lb. native clay mud.

Before going further it was decided to attempt to plug cavity and get returns. Four hundred cloth cement sacks were placed in the open 7⅝-in. casing and pumped down, requiring maximum pressure of 1,700 lb. Top of the sacks was found at 5,062 ft. Blowout preventer rams were closed, and the sacks pumped into the cavity at 5,382-94 ft. Drill pipe then was run to bottom, at 5,628 ft. Drilling was resumed and four more feet made but without returns. Another 400 sacks were placed in the casing and pumped down with 9½-lb. mud. Pressure built up to 1,500 lb. when the sacks went out. Four more sacks then were displaced to bottom with 1,000 lb. pressure, these being followed with an additional 400 sacks with a maximum pressure of 1,700 lb.

Drilling Below 5,000 Ft.

After drilling out sack bridge from 5,048 to 5,063 ft., blowout preventer rams were closed and the sacks pumped into the cavity. This was followed with 300 bbl. of mud and then an additional 400 sacks were pumped down the casing taking a maximum pressure of 2,000 lb. The top of these was found at 5,064 ft., or 10 ft. in the 7⅝-in. casing. Attempts to pump the sacks further down with mud failed, and the sacks were drilled out to the bottom of casing at 5,074 ft., after which they were pushed and pumped into the cavity. After getting down to 5,460 ft., an additional 200 sacks were pumped in the casing, and when the pumps were stopped the well started flowing back. Failing to stop the flow with mud, 200 more sacks were pumped in.

Topped at 5,056 ft., sacks were drilled out to 5,069 ft., and then pumped into the cavity. With bit on bottom, 15 ft., of new hole was drilled to 5,647 ft. with water. Pipe was pulled and the hole filled with clear water, forcing the mud into the cavity, and then the well started flowing back again. Starting back in the hole, the bit became plugged with sacks at 950 ft. The bit was pulled and cleaned, and while running back in, the blowout preventer rams were closed at 10 thribble intervals and mud pumped into the formation to prevent plugging the bit. Bridges were reamed through at 5,176-5,265 ft. and at 5,620-47 ft., and drilling was resumed with salt-water flow, but pumping mud, and getting partial returns.

On a trip at 5,782 ft., a tight hole had to be reamed to get back to bottom and 84 bales of Fibrotex and 63 sacks of Aquagel were mixed with the mud, weight of which was kept around 9⅓ lb. The hole continued to take mud, and sufficient new mud was added to maintain a full hole. Additional Fibrotex and Aguagel was pumped into the hole at various levels, and drilling was continued without serious interruption until 7,189 ft., where with cavity sections apparently negotiated it was decided to run a string of 5½-in. casing to protect the upper hole before proceeding further. Below 7,100 ft. some difficulty was experienced in trying to run an electrical-logging survey, and in several attempts it was impossible to get below 6,890 ft. However, no trouble was met in rotating through this section with drill pipe.

The string of pipe run was made up of 55 joints of 5½-in., 17-lb. flush-joint casing (totaling 3,373.03 ft.) on bottom; 119 joints of 17-lb. speedtite (4,011.74 ft.); 5 joints (213.07 ft.) of left-cut pipe. It was landed at 7,177.70 ft. and was cemented with 390 sacks of cement.

Drilling cut plug, hole was reduced to 4¾-in. Mud weight was built up to 11¼ to 11⅓ lb. Hole was carried to 7,660 ft. with little trouble. At that depth both a Baroid well-logging survey and a Schlumberger survey were run successfully, but in attempting to go back in the hole with the bit, it was possible to get back only to 7,400 ft. where, unable to break circulation, the drill stem stuck but was broken free after 15 minutes. Attempting at 7,200 ft. to ream down, the pipe stuck again. Freed after an hour and a half, the pipe was pulled back into the casing.

Going back down with the pipe to wash out, the hole heaved, stopping the pumps. Pipe was pulled up to 7,205 ft., and then washed back to 7,228 ft., but again the hole heaved, requiring from 10,000 to 30,000-lb. strain to pull the pipe out of the hole. The hole then was circulated for 9¾ hours while being washed up and down between 7,178-7,218 ft. Weighting materials were added to increase the mud weight to 12.5 lb., with some difficulty it was possible to get down to bottom, and the hole deepened to 7,704 ft. With the hole reamed and washed out, a string of 810 ft. of 4-in. o.d., 11.35-lb., seamless flush-joint liner was made up with a 4⅝-in., two-blade millable bit and a double back-pressure valve welded on bottom, with a float collar placed one joint above the bit. Run in on drill pipe to bottom, this string was cemented with 50 sacks of cement to 7,638 ft. (theoretically).

Top of cement in the 4-in. liner was found at 7,400 ft., and this was drilled out to 7,666 ft., which was left as the plugged-back total depth. With oil sands having been logged by Baroid logging survey at 7,627-47 ft. and with Schlumberger at 7,470-7,560 ft., preparations were made to perforate liner and test. First perforations, consisting of 60 three-eighths-in. holes at 7,635-65 ft. A total of 217 joints of 2-in., 470-lb., 8-thread electric-weld tubing, Grade H-40, was run and hung at 6,869 ft., and with blowout preventer removed and the upper half of the christmas tree installed, swabbing was started. The swabbing string consisted of 33 joints of 2⅞-in. drill pipe and 18 joints of 3½-in. drill pipe. Tubing kept plugging up, and after getting down to 6,000 ft., where, with pumps tied into the tubing, it was found impossible to break circulation with as much as 1,900-lb. pressure, it was decided to pull tubing and clean out. Stuck, the tubing was freed only after considerable difficulty and with 25,000 lb. of strain applied between 6,869-6,469 ft. (400 ft.), it was pulled with 20,000-lb. strain.

Twenty-one joints of the tubing were found plugged with large pieces of limestone, pyrites and calcite. Tubing collars showed scouring, and ridges were cut on the collars from 6,000 ft. down. A 3¼-in. diamond-point bit was run to 6,063 ft. without touching anything but it was impossible to get returns and in pulling back to 6,000 ft. 10 points strain above pipe weight was required. A 4¾-in. bit run into the hole was stopped at 6,005 ft. It later was found that the 5½-in. casing collapsed at that point. The bad place, however, was milled through without much difficulty and full returns were established. Letting down, bridges were washed out at 6,323-6,475 ft. and 6,725-6,888 ft., and with the hole apparently open down to the top of the 4½-in. liner at 6,888 ft., another string of 4-in. o.d. liner, consisting of 36 joints of 11.35-lb. external, internal flush-joint pipe was made up. In the bottom were three ¾-in. ports through which to cement. A float collar was placed one joint above the lead seal. This string, run in on drill pipe, was landed on top the first 4-in. liner at 6,888 ft., and cemented through the three ports with 100 sacks of cement. The cement was displaced to 6,828 ft. (theoretically) without returns, final pressure being 1,000 lb. Drill pipe then was backed off at the safety joint leaving the top of the liner at 5,756 ft.

Top of cement was found at 5,119 ft. Cement was broken through at 5,342 ft., where returns were lost. Pipe was let down to the top of the liner at 5,756 ft. without encountering any more cement. Inside the liner, with a 3¼-in. bit, hard cement was found at 6,730 ft. and three feet of it was drilled out. With pipe pulled out, 400 sacks of cement was pumped into the 5½-in. casing with Halliburton plugs behind the cement slurry, this being displaced to the top of the liner at 5,756 ft.

A 4¾-in. rock bit was run, and cement, topped at 5,666 ft. in the 5½-in. casing, was drilled out to the top of the 4-in. liner at 5,756 ft. A 3¼-in. diamond point bit then was run to drill out the cement inside the liner. Hard cement was drilled out at 5,756-5,776 ft., and at 6,730-6,856 ft., and float collar at 6,889 ft. The string was washed down to 7,666 ft., where float collar and cement were drilled out to 7,696 ft., within 8 ft. of the original total depth of the hole before being plugged back.

Running Perforating Gun

In running perforating gun, the gun stuck at 7,671 ft., necessitating pulling and running the 3¼-in. diamond point bit and reaming out again from 7,661-96 ft. On the next trip the gun went down without trouble and the liner was perforated with 10 three-eighths-in. holes at 7,691-96 ft., using the 2¼-in. o.d. gun. After hanging 180 joints of 2-in. external upset, 4.70-lb. tubing at 5,728 ft., 28 ft. above top of the 4-in. liner, washing the hole and replacing blowout preventer with upper half of the christmas tree, swabbing was resumed. The tubing was swabbed down to 4,000 ft. without shows and without any rise in fluid. Again the hole was mudded up and the christmas tree replaced with the blowout preventer, and tubing pulled. The liner was reperforated with 20 ⅝-in. holes at 7,525-30 ft. (former perforations at 7,635-65 ft. and 7,691-96 ft., respectively). With tubing rehung at the same level as before, and with blowout preventer replaced again with the christmas tree, the well started flowing a small stream of fresh water. After circulating around with fresh water to determine if mud was coming up out of the liner, a small amount of mud appeared in the returns, apparently being from the 28 ft. inside the 5½-in. casing below the tubing to the top of the liner. Salt water with a sulfur odor followed the mud, after which the hole was mudded up, connections changed and the tubing pulled.

Following this the 3¼-in diamond point bit was run to 7,576 ft. where the hole was circulated with mud for 5 hours with no salt water appearing in the returns, indicating that the salt water had entered the hole above the 4-in. liner. A drill-stem testing tool then was run with cone packer sealed on top of 4-in. liner at 5,756 ft. to check the source of trouble. Tests substantiated previous indications as to the source of the mud and salt water. Pulling the testing tool, 270 ft. of open end, 2⅜-in. drill pipe was run in on the bottom of 2-in. upset tubing to 6,015 ft., and 30 sacks of cement were mixed and pumped, plugging the 4-in. liner at 6,015-5,805 ft. Excess cement was circulated out.

After setting, cement plug inside the 4-in. liner at 5,810-6,015 ft. was drilled out, using a 3¼-in. bit on a string of 2⅜-in. drill pipe, and perforating gun rerun. At first it was impossible to get the tool below the top of the 4-in. liner, due to obstruction, and it was necessary to clean out these obstructions. However, with the hole finally clear, the liner was perforated at 7,520-30 ft. (previous perforation 7,525-30 ft.) with 40 three-eighths-in. holes. Tubing was hung as before at 5,728 ft., and after washing the well started flowing, making 423 bbl. of oil through a 12/64-in. choke in the first 24 hours, gaging 965 lb. pressure on the tubing and 1,600 lb. on the casing. On a later two-hour potential test it flowed 49.48 bbl. of oil, with 4.5 per cent water, through a 14/64-in. positive choke.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Characteristics of Good Quality Whale Oil Shown by Tests

We wish to obtain complete information covering the quality of whale oil but find much confusing information in the reference books. Any data of tests and chemical analyses will be of value to us.—A. L. C.

There are several grades of whale oil available, the better grades being of light yellow color and the poorer ones brown to black. The oils discussed here represent the better quality group.

PHYSICAL PROPERTIES OF WHALE OIL

Specific gravity at 60° F.	0.9279
A.P.I. gravity at 60° F.	21.0
Flash (open cup) °F.	490
Melting point, °F.	46
Viscosity, Saybolt U. at 100° F.	194 sec.
Color	yellow

An investigation by Glimm and Giese furnishes quite complete information about the physical and chemical properties of whale oil. The following is arranged from their extensive report covering a whale oil of reddish-yellow color. The physical properties are given first.

Specific gravity at 60° F.	0.9261
A.P.I. gravity	21.3
Refractive index at 104° F.	1.4617
Acid value	5.1
Saponification value	197.3
Iodine value	111.6
Mean molecular weight:	
(*a*) Glycerides	853.1
(*b*) Acids	271.7

The chemical analyses indicated the following composition:

	Per cent
Fatty acids	93.75
Glycerol	4.64
Unsaponifiable	1.58

The fatty acids separated were yellow and pasty, having a fishy odor, apparently composed of 26 per cent solid and 74 per cent liquid acids. Unsaturated acids of the C_{20} and C_{22} series were found. Palmitic, myristic and stearic acids were separated. The quantity of stearic acid present was small, and if higher fatty acids were present they could not be more than traces. The tetra, hexa, octa, and do decenoic unsaturated acids of the oleic series were present.

Reference: Glimm and Giese, Fette und Seifen, 337, 1939.

Production of Natural Gasoline Not Subject to Wide Variation

How much gasoline is produced from natural gas on an average? I am told that the volume made during any period is not at a uniform rate, shows large fluctuations, and would like to know what is the reasons for the variations.—H. D. E.

The U. S. Bureau of Mines issues monthly reports of the production of natural gasoline, the latest available being for the month of September 1939. The daily average production for May was 5,799,000 gal., compared with 5,925,000 gal. daily average for April. The daily average in September was 5,785,000 gal., compared with 4,606,000 gal. in August 1939. The difference in the volume of natural gasoline produced in these 2 months was due largely to the 15-day shutdown in August.

The variations that have been reported from time to time cannot be considered to be exceptional. The normal fluctuations correspond to those experienced in the production of crude oil; that is, largely conditions in the fields. There are some slight differences in yields due to seasonal changes, demand for the product, and the consumption of natural gas.

The bureau states that the shipments to jobbers and retailers increased from 8,694,000 gal. in August to 9,660,000 gal. in September. Exports increased from 15,346,000 to 19,236,000 gal.

The average vapor pressure of all shipments increased, and the weighted average for all movements in September was 20.7 lb. compared with 19.2 lb. in August and 19.6 lb. in September 1938. Since about March of this year the average vapor pressure has been higher than those for 1938.

References: U. S. Bureau of Mines Report Nos. 944a-53 and 57 on Natural Gasoline, 1939.

Colza Burning Oil Composed of Mixed Oils of Different Origin

What is the composition of the oil used in the lower part of Mississippi for a burning oil and called colza oil?—T. D. V.

We have no information relating to the specific nature of the oil used as a burning oil in the particular locality mentioned. However, there is an oil known as colza oil.

The United States Dispensatory gives the following information under colza oil. An oil expressed from the seed of brassica campestris, which is a variety of cabbage. This is used as a burning oil and lubricating oil. The raw oil has a specific gravity 0.915, or A.P.I. 23.1°, and the refined oil 0.9136, or A.P.I. 23.5°. When chilled to —4° C. stearin separates and at —6° C. it becomes a yellowish buttery mass. The oil contains the glycerides of stearic acid and an acid isomeric with oleic acid.

It is reported that in some parts of the South there is an oil used as a burning oil known under the name of colza oil, which is a mixture of equal parts of cotton-seed oil and a heavy gas or light lubricating oil.

Physical and Chemical Laws and Principles Used in the Petroleum Industry

POISEUILLE'S LAW OR EQUATION

The pressure required to force oil through a specified length of pipe is directly proportional to the viscosity and velocity of the liquid and inversely proportional to the area of the cross section of the pipe. The law holds fairly well for low velocities, where the oil flows like a number of concentric tubes. Under turbulent conditions the oil behaves like balls rolling over each other; here the law of Poiseuille does not hold true.

For a discussion of this theorem see McAdam's Heat Transmission, Page 111.

Sulfates and Sulfonates For Cleaning Materials

What are the sulfates that are being used in combination with petroleum oils in place of soaps as cleaning agents? If such combinations have any merit would you please explain?—E. R. H.

The utilization of chemical compounds, not directly related to soap, is a recent development of the laundry industry. As a group these substances are known as nonsoap detergents; included are the sulfates and sulfonates of the higher alcohols of the paraffinic hydrocarbons. The organic acid group COOH and the alcohol OH have an important function in the synthesis of these detergents.

The sulfates are made from the higher fatty alcohols by combining the sulfur from the acid group, SO_3H, with the alcohol to produce the sulfonate group $C{\cdot}O{\cdot}SO_3H$. The principles involved are illustrated in the following:

1. Changing the fatty acid to the alcohol.

$$\underset{\text{Palmitic acid}}{CH_3 \cdot (CH_2)_{14} \cdot COOH} + \underset{\text{Hydrogen}}{2H_2} = \underset{\text{Cetyl alcohol}}{CH_3 \cdot (CH_2)_{14}\,CH_2OH} + \underset{\text{Water}}{H_2O}$$

This reduction is made with the assistance of a catalyst.

2. Preparing the sulfate from the alcohol and sulfuric acid.

$$\underset{\text{Cetyl alcohol}}{CH_3(CH_2)_{14} \cdot CH_2OH} + \underset{\text{Sulfuric acid}}{H_2SO_4} = \underset{\text{Cetyl sulfate or ester}}{CH_3(CH_2)_{14} \cdot CH_2 \cdot O \cdot SO_3H} + \underset{\text{Water}}{H_2O}$$

3. The ester is neutralized with sodium NaOH hydroxide to produce the sulfate

$$CH_3(CH_2)_{14} \cdot CH_2O \cdot SO_3H + NaOH = \underset{\text{Cetyl sodium sulfate}}{CH_3(CH_2)_{14} \cdot CH_2O \cdot SO_3Na} + \underset{\text{Water}}{H_2O}$$

A number of sulfonated fatty alcohols of high molecular weight, together with their sodium salts, usually make up the commercial products. Some preparations are reported to contain petroleum oils.

The national Bureau of Standards states: "The commercial materials may also contain some unchanged fatty alcohol and varying amounts of sodium sulfate. These salts are available as practically white or cream-colored powders or flakes, soluble in water and alcohol. However, solutions, such as a solution of the sodium or triethanolamine salt or lauryl sulfate are used as shampoos. These salts are practically neutral in water solution, are good wetting-out agents and emulsifiers, and have excellent lathering or sudsing properties. Their calcium and magnesium salts are soluble, hence they can be used in hard water or sea water without the formation of objectionable precipitates. They may be used in alkaline solutions or dilute acid solutions. These salts are used for washing fine fabrics (especially silk and wool) in the household, especially in hard-water districts. They have been used to some extent in power laundries and for a variety of detergent operations in the textile and other industries. Another important class of wetting and detergent materials includes alkyl sulfonates containing an amino group.

Reference: F. W. Smither, Washing, Cleaning, and Polishing Materials, national Bureau of Standards, U. S. Department of Commerce, Circ. 424.

The Increased Efficiency

REPUBLIC

FIELD OPERATIONS

Summarizing the Week's Developments

OKLAHOMA—Hunton-lime production was uncovered in the Milroy pool, Stephens County, in a well that found Simpson production at 8,157 ft. in 1927 and was plugged back to the shallower zone when production declined recently. It flowed 2,067 bbl. of oil in 19 hours. The western area of the St. Louis field, Pottawatomie County, was extended one 40-acre location.

KANSAS—First oil production in the Lyons gas field, Rice County, was found at a well 1½ miles southeast of the county seat. A pool opener was completed 1½ miles southeast of the town of Ellinwood, Barton County. The South Snider pool in Stafford County, Walters pool in Ellis County, Burnett pool in Rooks County, Haferman pool in Rice County and Coralena pool in Russell County were extended.

LA-ARK-TEX—A wildcat in Columbia County, Arkansas, Standard's No. 1 Petty Stave Co., showed a good gas blow and 370 ft. of mud, cut with oil, on a drill-stem test at 7,940-69 ft. One new test and no completions were reported from the Tinsley, Mississippi, area. In South Louisiana the Paradis field in St. Charles Parish, now productive in two sands, is believed to be on a large and prolific structure. St. John the Baptist Parish has been added to the South Louisiana oil parishes with the completion of a distillate well.

MICHIGAN—A 2,500-bbl. well in the heart of the Redding pool in Clare County was the best completion in the state in several weeks. The old Midland and Isabella County areas are being given a new exploration.

NEW MEXICO—A well in the Loco Hills pool in Eddy County started at 110 bbl. per hour, largest producer in that field up to date.

ILLINOIS—Devonian-lime failures in the Salem and Louden pools in Marion and Fayette counties will not discourage the search for production in that deep formation as it was already known to be inconsistent as a producer. Magnolia Petroleum Co. deepened 16 old Benoist-sand wells to the Aux Vases and they averaged 600 bbl. per day per well from the deeper pay.

TEXAS: Gulf Coast—Two deep wildcats in Fort Bend County staged attempted blowouts. An extension to the West Ranch field in Jackson County will stimulate drilling thereabouts. Wildcats were started in San Jacinto, Harris and Tyler counties.

Southwest Texas—The Hoffman gas field in Duval County has been added to the oil fields of the district. A 2,000-ft. west extension to the East White Point field in San Patricio County is probable.

North Texas—A fourth deep pool was opened in Clay County by Continental Oil Co. 4 miles south of the town of Jolly. The discovery well was permitted to flow only 45 minutes and estimates of its potential ranged up to 4,000 bbl. per day.

West Texas—Several widely separated wildcats are near completion in the Permian basin. The Stribling pool in Stephens County in the Central Texas area is attracting attention with new completions and new wells drilling.

Completions in All Fields

(Week Ended December 2, 1939)

	Oil	Gas	Dry	Total	1939 total comp. to date	1938 total comp. to date
N. Y., Pa., and W. Va.	51	24	8	83	3,028	3,270
Ohio	8	11	5	24	969	908
Indiana	1	2	6	9	315	121
Kentucky	9	2	6	17	656	824
Illinois	68	0	19	87	3,397	1,944
Michigan	17	1	13	31	1,340	874
Kansas	19	0	4	23	1,248	1,487
Oklahoma	12	0	12	24	1,604	1,575
Texas:						
North Central Texas	34	0	21	55	2,233	2,846
West Texas	34	0	5	39	1,737	1,814
Texas Panhandle	13	3	2	18	405	524
East Texas	10	0	0	10	366	1,648
East Central Texas	3	2	2	7	75	326
East Texas Border	2	0	3	5	252	125
Gulf Coast Texas	23	2	2	27	1,234	1,227
Southwest Texas	27	1	13	41	2,067	2,013
Total Texas	146	8	48	202	8,369	10,523
North Louisiana	4	3	4	11	480	585
Gulf Coast Louisiana	24	0	6	30	648	449
Total Louisiana	28	3	10	41	1,128	1,034
Arkansas	3	0	0	3	232	228
Montana	4	0	0	4	154	102
Wyoming	1	0	0	1	123	145
Colorado	0	0	0	0	13	13
New Mexico	12	0	0	12	553	519
Utah	0	0	0	0	0	3
California	15	2	2	19	865	1,182
Total United States	394	53	133	580	23,994	24,752
Total previous week	406	51	132	589		
Week ended Dec. 3, 1938	370	35	103	508		

Outstanding Fields—Highlights

(Week Ended December 2, 1939)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
K.M.A.	28	53	3	2,268	1,186	25,800
Wasson-Bennett	18	83	9	6,706	532	12,578
Ector County	8	67	11	9,352	1,940	36,500
Pecos County	6	25	1	203	1,215	24,500
Jones County	7	16	6	3,360	590	6,247
East Texas	5	16	10	338	26,133	299,005
OKLAHOMA						
Cement	6	17	1	507	274	5,925
St. Louis	7	30	*7	5,699	906	29,800
*Six wells recompleted.						
KANSAS						
Barton County	6	22	3	507	505	17,065
Ellis County	4	20	2	1,050	452	11,700
Rice County	6	31	3	823	1,397	29,150
Russell County	8	32	5	2,211	1,368	27,020
NEW MEXICO						
Lea County	9	58	4	1,084	2,312	99,380
Eddy County	10	60	8	7,606	468	12,750
LA-ARK-TEX						
Cotton Valley, La. (deep)	0	6	0	0	146	13,885
Magnolia, Ark.	1	6	2	1,630	79	20,725
MICHIGAN						
Freeman-Redding	4	11	2	2,550	128	14,963
Kent County	10	46	11	5,152	219	13,565
CALIFORNIA						
Montebello	4	32	2	791	316	28,550
ILLINOIS						
Salem	9	99	21	7,507	1,457	182,240
Louden	6	82	19	3,305	1,244	69,890
Other basin fields	24	272	28	4,587	1,898	71,255
Old fields						8,860

Illinois, Indiana and Kentucky

By STAFF CORRESPONDENT

Inconsistent Devonian Lime Makes Every Test a Wildcat

CENTRALIA, Ill., Dec. 4.—The search for Devonian-lime production in Illinois was given two more setbacks in the past week when Max Pray's No. 1 Cole, SE NW SE Section 16-2n-2e, Salem field, proved to be a water well and the same operator's No. 6 Ferguson, C N½ NW NW Section 18-7n-3e, in the Louden pool in Fayette County was abandoned at 3,246 ft. These disappointments and the poor showings being made by recent Devonian-lime tests in the Sandoval field in Marion County have not affected a continuance of the search for the deeper lime pay, the inconsistency of which makes "every test a wildcat." Several Devonian tests are in progress in Marion County. W. C. McBride, Inc., is drilling No. 16 N. Lee, 340 ft. from east and 392 ft. from south lines of NE SE Section 29-2n-2e, a mile and a quarter south of Kingwood Oil Co.'s Devonian discovery on the A. Shanafelt farm. The McBride company's Lee lease is one of the most prolific producers in the Salem field. One of the McClosky-lime wells on this property started at 7,000 bbl. per day and the lease is producing about 8,000 bbl. per day at present. Magnolia Petroleum Co. has three Devonian tests in progress.

An important wildcat in Williamson County, Nation Brothers' No. 1 Coleman, NW NE SW Section 1-10s-1e, swabbed water and oil at a total depth of 1,990 ft., in McClosky lime on Saturday.

Storms Field's Importance

The Storms gas field in White County, which has been turned into an oil field by recent completions, is one of the most interesting spots in the southern part of the basin. Big gas production accompanies the oil produced, and as there is no law regulating the production of either gas or oil in the state the question of how to handle these wells with a minimum of waste and at the same time with profit to the operator becomes important.

The Magnolia Petroleum Co. deepened 16 wells in the Salem pool from the Benoist sand to Aux Vases sand and brought in 9,212 bbl. of new production from the lower sand as a result. The wells were on the Sam Shanafelt, J. H. Young and Buzzard Brothers farms in Sections 20, 21, 28 and 29, Township 2n-2e. The wells are not listed among the past week's completions as they had been put on the completion list when they were finished in Benoist sand. This deepening process will be done in hundreds of Benoist-sand wells in the field under which also the McClosky lime will be productive in many cases.

Sixty-eight oil wells were completed in the state last week and 19 dry holes. The new oil wells had an initial production of 15,399 bbl., but many of them produced only a short time on their first day. The record by county, giving completions and initial production was as follows: Fayette County, 19 wells, 3,305 bbl.; Clay, 1 well, 161 bbl.; Richland, 3 wells, 1,232 bbl.; Marion, 24 wells, 8,014 bbl.; Wayne, 4 wells, 560 bbl.; Clinton, 1 well, 80 bbl.; Jefferson, 2 wells, 281 bbl.; Edwards, 1 well, 80 bbl.; Wabash, 8 wells, 893 bbl.; Washington, 1 well, 40 bbl.; White, 3 wells, 673 bbl.; Clark, 1 well, 80 bbl. One dry hole each was completed in Clay, Marion, Wabash, White, Hamilton, Williamson, Livingston, Brown, Effingham, and Coles counties; three in Fayette, two in Jefferson and four in Edwards.

The completion record of the week follows, the initial production representing 24 hours unless otherwise stated:

Fayette County

In Fayette County, Louden field, Carter Oil Co.'s No. 1 Kagey, SW SE SE Section 14-8n-3e, Cypress sand at 1,460-86 ft., shot with 10 qt., swabbed 146 bbl. in 12 hours, and later 240 bbl. in 24 hours. Carter's No. 2 Kagey, NE SE SE Section 14-8n-3e, Cypress at 1,477-1,500 ft., shot with 10 qt. at 1,487-93 ft., swabbed 318 bbl. per day. Roby Drilling Co.'s No. 1 Cummings, SE NW SW Section 16-8n-3e, shot with 40 qt. at 1,505-18 ft. and with 10 qt. at 1,562-70 ft., pumped 125 bbl. Carter Oil Co.'s No. 3 Eaglestone, NE SE SW Section 20-8n-3e, shot with 10 and 20 qt. at 1,514-20 ft., swabbed 12 bbl. in 10 hours, rated at 24 bbl. per day. Carter's No. 4 Eagleton, C S½ SE SW Section 20-8n-3e, Cypress sand at 1,507-32 ft., dry and Paint Creek sand at 1,583-93 ft., water; plugged and abandoned. Carter's No. 4 Boles, NW SW SW Section 21-8n-3e, Bethel sand at 1,502-54 ft., shot with 40 qt., flowed 264 bbl. Carter's No. 3 Fortner, NE NW SW Section 27-8n-3e, dry and abandoned at 1,585 ft., Cypress sand at 1,504-30 ft. and Paint Creek at 1,558-61 ft. Carter's No. 4 Hogan, NW SW NW Section 27-8n-3e, shot with 20 qt. at 1,565-71 ft., swabbed 43 bbl. in 12 hours. Carter's No. 4 Hoppner, NW NE SW Section 27-8n-3e, location abandoned. Carter's No. 4 Edith Marshall, NE SE NW Section 22-8n-3e, shot with 40, 10, and 10 qt., swabbed 56 bbl. in 7 hours. Casing was set at 1,474 ft., total depth 1,504 ft. Robert E. Markham and others' No. 1 Emmerson, SE SE SW Section 31-8n-3e, set 7-in. casing at 1,506 ft., total depth 1,532 ft., shot with 50 qt., pumped 140 bbl. Cypress sand was topped at 1,501 ft. Carter's No. 3 Jack Dial, NW SW NW Section 34-8n-3e, shot with 10 and 30 qt., swabbed 510 bbl. in 24 hours. Casing set at 1,582 ft., total depth 1,591 ft.

Carter's No. 10 E. Hopper, SE NW SW Section 5-7n-3e, shot with 20 and 20 qt. at 1,470-76 ft., swabbed 248 bbl. in 12 hours through casing. Carter's No. 7 Ramsey-Hopper, NW NE SW Section 5-7n-3e, Bethel sand at 1,565-82 ft., shot with 20 qt., swabbed 432 bbl. per day. Carter's No. 8 Quade, C E½ NE SW Section 6-7n-3e, shot with 40 qt. at 1,492-95 ft., swabbed 23 bbl. through casing in 12 hours; Cypress sand lay at 1,483-1,506 ft. Carter's No. 3 Mabel Durbin, SW SW NE Section 8-7n-3e, shot with 30 and 15 qt. at 1,432-36 ft., swabbed 300 bbl. per day, total depth 1,522 ft. Carter's No. 5 Owen, NE NE SW Section 8-7n-3e, shot with 10 qt. at 1,560-61 ft. and with 10 qt. at 1,505-08 ft., swabbed 28 bbl. in 12 hours. Union Product Petroleum Co.'s No. 8 Arnold, SE NW SW Section 8-7n-3e, total depth 1,560 ft., casing set at 1,485 ft., shot with 10, 30, and 10 qt., pumped 80 bbl. per day; Cypress topped at 1,458 ft. and Paint Creek sand at 1,549 ft. Stewart Drilling Co.'s No. 1 Durbin, NW NE SW Section 9-7n-3e, Glen Dean sand at 1,348-60 ft.; no Cypress sand; Paint Creek at 1,569-76 ft., water, abandoned. W. B. Johnson's No. 4 Logue, SW SW SW Section 18-7n-3e, Cypress sand at 1,548-59 ft., shot with 30 qt., pumped 85 bbl. of fluid per day, 7 per cent water. Carter Oil Co.'s No. 8 Coddington, NE SW SW Section 20-7n-3e, Cypress at 1,512-57 ft., shot with 80 qt. at 1,531-56 ft., swabbed 145 bbl. in 8 hours, Cypress sand at 1,512-57 ft. Carter's No. 7 Lewis Hackert, NE NW SW Section 20-7n-3e, Cypress sand at 1,503 ft., total depth 1,550 ft., shot with 80 qt., swabbed 181 bbl. in 12 hours.

In Clay County Dick Duncan's No. 1 Ranes, NW cor. NE SW SE Section 17-5n-5e, salt water hole, abandoned at 2,338 ft.

Richland County

In Richland County Pure Oil Co.'s No. 1 Varner A, NW NW NW Section 6-4n-10e, flowed 835 bbl. per day through choke from Ste. Genevieve lime pay at 2,829-36 ft. Pure Oil Co.'s No. 2 Sayre Consolidated, NW SW SW Section 13-4n-9e, pay at 2,592-2,617 ft., pumped 136 bbl. per day. Pure Oil Co.'s No. 11 Palmer-Taylor, NE NE SE Section 5-3n-9e, Cypress sand 2,580 ft., total depth 2,582 ft., pumped 261 bbl. of oil and 179 bbl. of water.

In Clinton County Cascade Oil Co.'s No. 1 Adams, SE cor. NE¼ Section 13-3n-1w, Benoist sand at 1,437-45 ft., pumped 250 bbl. of oil and 40 bbl. of water in 24 hours.

Marion County

In Marion County Shell Oil Co., Inc.'s No. 1 Ververs, SW cor. NW¼ Section 18-3n-1e, Benoist sand at 1,425-31 ft., pumped 182 bbl. in 24 hours.

In the Tonti field in Marion County Harvey Oil Co.'s No. 8-A Kagey, SW cor. NW SE Section 33-3n-2e, McClosky lime at 2,152 ft., total depth 2,165 ft., acidized with 2,000 gal., pumped 300 bbl. Bates & Lichliter's No. 1 Bruner, SE NE SW Section 33-3n-1e, hole full of water from McClosky lime at 2,164 ft., abandoned at 2,170 ft.

In the Sandoval field in Marion County Big Four Oil Co.'s No. 1 Sherman, NE cor. NW NW Section 9-2n-1e, Devonian lime top at 2,949 ft., pay at 2,991-3,003 ft., pipe perforated with three shots at 3,002-03 ft., recovered only water, perforated with 20 shots at 2,991½-95 ft., pumped 25 bbl. of oil and 1,410 bbl. of water in 24 hours.

In the Salem field in Marion County Magnolia Petroleum Co.'s No. 39 Chitwood, SE NE SW Section 16-2n-2e, McClosky lime at 2,006-49 ft. and 2,056-78 ft., acidized with 3,000 gal., flowed 520 bbl. Texas Co.'s No. 1 Wallis, SE SE SE Section 19-2n-2e, McClosky pay at 2,112-20 ft., pumped 23 bbl. in 8 hours. Kingwood-Bell's No. 1 Shanafelt A, SE NW NE Section 20-2n-2e, old total depth 2,009 ft., deepened to 2,236 ft., acidized with 2,000 gal., and reacidized with 2,000 gal., flowed 259 bbl. per day. Magnolia Petroleum Co.'s No. 24 Young, NW SW NE Section 20-2n-2e, old total depth 2,075 ft., deepened to 2,230 ft., St. Louis lime pays at 2,175-91 ft., 2,204-07 ft., and 2,212-20 ft., acidized with 4,000 gal., flowed 288 bbl. per day through tubing. Ohio Oil Co.'s No. 28 M. Young heirs, SE NW SW Section 20-2n-2e, McClosky lime pays at intervals from 2,017 ft. to 2,088 ft., acidized with 4,000 gal., flowed 300 bbl. per day. Texas Co.'s No. 4 Hester, SW NE NE Section 21-2n-2e, McClosky lime at 2,060-69 ft., pumped 49 bbl. Texas' No. 3 H. Shanafelt, NE cor. SE SW NE Section 21-2n-2e, McClosky lime at 2,062-72 ft. and 2,090-96 ft.; water in the lower section and the hole was plugged back to 2,090 ft., pumped 112 bbl. Magnolia Petroleum Co.'s No. 65 J. H. Young, C E½ NE NW Section 28-2n-2e, McClosky at 2,025-70 ft., pumped 114 bbl. Texas' No. 9 Kleinschmidt, SE NW NE Section 28-2n-2e, Benoist sand 1,841-65 ft., pumped 105 bbl. Magnolia Petroleum Co.'s No. 26 S. Shanafelt, NE SE SW Section 29-2n-2e, Benoist sand at 1,696 ft., total depth 1,845 ft., plugged back to 1,796 ft., flowed 996 bbl. per day. Magnolia's No. 28 S. D. Shanafelt, NW SE SW Section 29-2n-2e, McClosky lime at 1,927-49 ft. and 1,955-62 ft., acidized with 3,000 gal., pumped 156 bbl. Texas Co.'s No. 19 W. Freiderich A, NE NE NE Section 30-2n-2e, McClosky lime at 2,094-2,110 ft., pumped 161 bbl. per day. Texas Co.'s No. 10 Dunning, C E½ NW SE Section 31-2n-2e, McClosky at 1,850-97 ft., flowed 112 bbl. in 24 hours. Texas' No. 5 Hopkins, C N½ NE SE Section 31-2n-2e, McClosky lime at 1,842-47 ft. and 1,880-90 ft., flowed 119 bbl. per day. Texas Co.'s No. 13 M. Williams, C S½ NE SE Section 31-2n-2e, McClosky lime at intervals from 1,840-88 ft., flowed 378 bbl. per day. Texas Co.'s No. 14 M. Williams, SW NW SW Section 32-2n-2e, Fredonia lime pay at 1,847-88 ft., flowed 455 bbl. per day. Texas' No. 7 Hays, SW SW SE Section 33-2n-2e, Benoist sand at 1,831-58 ft., flowed 161 bbl.

Texas Co.'s No. 10 E. Farthing, SE NE NW Section 4-1n-2e, in the south end of the Salem field, Benoist sand at 1,829 ft., total depth 1,873 ft., pumped 182 bbl. Texas Co.'s No. 15 Tate, NE SW NW Section 5-1n-2e. Aux Vases sand at 1,720-1,815 ft., flowed 189 bbl. in 3 hours. Texas' No. 9 J. G. Johnson, NE SW SE Section 6-1n-2e, Aux Vases sand shot at 1,773-1,822 ft. with 50 qt., flowed 1,995 bbl. per day. Texas Co.'s No. 3 Fried-

erich, SE NE NW Section 7-1n-2e, Aux Vases sand at 1,823-55 ft., shot with 55 qt. at 1,790-1,855 ft., flowed 1,015 bbl. T. Boyce's No. 1 Stover, in Section 30-1n-2e, deepened from 1,832 ft. to 2,375 ft., was dry and abandoned. Fredonia lime was topped at 2,282 ft.

In Clay County Pure Oil Co.'s No. 1 Bissey, C W½ NW NW Section 17-2n-8e, total depth 3,106 ft., 5,000 gal. of acid, pumped 161 bbl. of oil and 49 bbl. of salt water per day. Pure's No. 2 F. T. Brach A, C E½ NW NW Section 34-1n-7e, Clane pool, Wayne County, pumped 55 bbl. per day after an acid treatment at 3,016-31 ft., Aux Vases sand.

In Clinton County Brookside Oil Co.'s No. 5 C.B.&Q. R.R., in the Centralia field in Clinton County, total depth 1,338 ft., pumped 80 bbl. per day from Benoist sand topped at 1,324 ft.

In Jefferson County Magnolia Petroleum Co.'s No. 4 Stonechiper, SE SE NE Section 9-1s-1e, Benoist sand at 2,061-74 ft., no show of oil, will be used as a water-disposal well, plugged-back depth 2,050 ft. Carter Oil Co.'s No. 5 Carl Hall, NW NW SE Section 4-1s-2e, shot with 10 qt. in Bethel sand at 1,956-60 ft., pumped 221 bbl. of oil per day. Carter's No. 6 Carl Hall, NE SE NW Section 4-1s-2e, Benoist sand at 1,953-60 ft., shot with 10 qt., pumped 60 bbl. per day.

In Wayne County Roche & Voyles' No. 1 Milner, C E½ SW SE Section 33-1s-7e, perforated with 60 shots at 3,249-58 ft., flowed 420 bbl. in 16 hours.

Dunlap's No. 2 Felix, SE SW NE Section 34-2s-8e, Wayne County, Fredonia lime pay at 3,396-3,412 ft., at intervals, pumped 45 bbl. a day.

In Edwards County Thorpe and others' No. 1 Broster, NW SE NW Section 33-1s-14w of second principal meridian, dry and abandoned at 3,098 ft., McClosky lime top at 3,030 ft.

Wabash County

In Wabash County Shelburn's No. 1 Timberlake, SW cor. Section 9-2s-13w, Cypress sand at 2,412-29 ft., shot with 15 qt., pumped 52 bbl. of oil and 10 bbl. of water per day. Simmel's No. 1 Coe, NW cor. NE NE NW Section 16-2s-13w, Bridgeport sand at 1,816-29 ft., shot with 10 qt., pumped 95 bbl. of oil and 5 bbl. of water per day. Continental Oil Co.'s No. 2 A. E. Schultz A, SE cor. NE SE SE Section 8-2s-13w, Cypress sand at 2,429-38 ft., shot with 10 qt., pumped 78 bbl. per day. Magnolia Petroleum Co.'s No. 1 Batson, NE NE SE Section 17-2s-13w, Cypress sand at 2,399-2,408 ft., shot with 20 qt., pumped 12 bbl. per day. Magnolia's No. 2 Batson, NW NE SE Section 17-2s-13w, Cypress sand at 2,391-2,415 ft., shot with 20 qt., pumped 204 bbl. per day. Tide Water's No. 1 Spencer, NE SW SW Section 17-2s-13w, Cypress at 2,461-85 ft., shot with 20 qt., flowed 162 bbl. per day. Continental Oil Co.'s No. 2 Gray, SE SE SW Section 20-2s-13w, Cypress sand at 2,475-92 ft., shot with 20 qt., pumped 130 bbl. Tide Water's No. 5 Elkins, NW SW SW Section 29-2s-13w, Cypress sand at 2,460-76 ft., pumped 160 bbl. in 24 hours.

In Edwards County Herrick & Broadus' No. 1 Broster, NW SW SE Section 34-2s-14w of second principal meridial. Cypress sand at 2,632-47 ft., shot with 10 qt., pumped 80 bbl. per day. Rockhill's No. 5 Twist A, SW NW SE Section 32-2s-7e, dry and abandoned at 3,408 ft.; Fredonia lime topped at 3,344 ft. New Penn's No. 1 Xanders, NE SW SW Section 7-2s-9e, Devonian lime topped at 5,206 ft., drilled to 5,645 ft. and abandoned as dry. Noah & Morrison's No. 1 William Brown, NW NE NW Section 15-3s-10e, dry and abandoned at 3,374 ft.; St. Louis lime at 3,368 ft.

In Wabash County Landreth Production Co.'s No. 1 Bump, SE SW SW Section 4-2s-13w, shot with 20 qt. at 2,448-60 ft., dry and abandoned. It had been drilled to 2,820 ft. and plugged back to test Cypress sand.

In Wayne County Texas Co.'s No. 1 Poorman, SW SE SE Section 31-3s-8e, McClosky lime at 3,374-76 ft., dry, plugged back to 3,335 ft. and pumped 40 bbl. of oil and 15 bbl. of water.

In Washington County Shell Oil Co., Inc.'s No. 1 Mary Dix, NW NE NE Section 19-3s-1w, Benoist sand at 1,359-70 ft., pumped 46 bbl. of oil and ⅓ bbl. of water.

In Jefferson County Magnolia Petroleum Co.'s No. 1 Brown, NE SE NW Section 22-3s-2e, dry and abandoned at 2,764 ft.

In White County Vance Ford and others' No. 1 Givens, NE NE NE Section 10-5s-10e, dry and abandoned at 3,108 ft. Exchange Oil Co.'s No. 1 Storms, SW SW NE Section 14-6s-9e, Waltersburg sand at 2,238 ft., total depth 2,278 ft., flowed 408 bbl. of oil but no estimate was made on the gas production. Penn Illinois Oil Co.'s No. 3 Porter, C W½ SE SE Section 12-6s-8e, McClosky lime at 3,069-79 ft., acidized with 2,000 gal., pumped 250 bbl. of oil and 4 bbl. of water. Blackstock's No. 1 Storms, NW NE NE Section 23-6s-9e, Waltersburg sand at 2,223-66 ft., flowed 15 bbl. of oil per day, no estimate on gas production.

In Hamilton County Alma Oil & Gas Co.'s No. 1 Federal Chemical & Coke, SW SW SE Section 9-7s-6e, dry and abandoned at 3,389 ft.; St. Louis lime was topped at 3,389 ft.

In Williamson County J. H. Williams' No. 1 Smathers, NE SE NE Section 9-9s-2e, dry and abandoned at 2,500 ft.

In Livingston County Mitchell & Frädenhagen's No. 1 McWilliams, NW NW SE Section 3-30n-6e, was dry and abandoned at 1,539 ft.

In Brown County J. W. Fairbairn's No. 1 Newton, SW SW SE Section 33-2s-4e of fourth principal meridian, total depth 415 ft. in Niagara lime, dry and abandoned.

In Clark County W. R. Miller's No. 1 Booth, SE NE NW Section 17-11n-14w of second principal meridian, pumped 80 bbl. from Trenton lime pay topped at 2,294 ft., total depth 2,462 ft. It had been acidized with 1,000 gal. and shot twice with 20 qt. and 240 qt.

Oil Inc.'s No. 1 C. T. Wade, NW SW NE Section 28-5n-4e, dry and abandoned at 2,511 ft.

In Coles County Daugherty & Dunn's No. 1 Mitchell, NE cor. SE NE SW Section 24-11n-10e, dry and abandoned at 650 ft.

In Fayette County Max Conrey's No. 1 Bert Smith, NE cor. NW¼ Section 6-5n-3e, Cypress sand at 1,626 ft., total depth 1,637 ft., pumped 75 bbl. of oil and 4 bbl. of water per day.

New Wildcat Operations

In Bureau County Kerchner's No. 1 Ginther, 112 ft.

(Continued on Page 84)

CENTRAL OHIO

NEWARK, Ohio, Dec. 4.—The most interesting wells drilling in Ohio are deep tests in Morgan and Medina counties. In Morgan County Foraker and others' No. 1 Charles Dearth in Section 13, Meigsville Township, had the bottom of the Niagara lime at 4,712 ft. and was drilling below 4,887 ft. In Medina County McCrea and others' No. 2 Clayton Billman in Section 6, Spencer Township, had the top of the Trenton lime at 4,090 ft. and was drilling at 4,460 ft. It had had no showings. The week's completed work in the fields covered by this report included 5 oil wells, 9 gas wells, and 4 dry holes.

In Athens County, Lodi Township, A. D. Townsend's No. 3 G. M. Weatherby, Section 17, gaged 100,000 cu. ft.

(Continued on Page 68)

WESTERN KENTUCKY

OWENSBORO, Ky., Dec. 4.—Operators in western Kentucky completed nine oil wells, two gas wells, and six dry holes in the past week in review. The largest oil completion was a 150-bbl. well producing from Jett and Jones sands in the Utica district, Daviess County. No new McClosky-lime production was reported. Thirteen new operations were started in seven counties. Following was the week's record:

Butler County, Silver City district: Billy Phillips' No. 4 Martha Hawes, 10-bbl. well in Jones sand, total depth 547 ft. J. C. Miller, trustee's No. 8 Martha Hawes, drilling at 260 ft.

Daviess County, Handyville district: W. E. Hupp's No. 3 Lula Akin, spudding in. A. D. Schaffer's No. 2 Mort Fulkerson, location. J. C. Miller, trustee's No. 1 John Howard, McClosky saturation at 1,776-88 ft., total depth 1,813 ft., Blue Lick at 1,813 ft., plugging back to 1,788 ft. Cane Run School district: I. C. Huff's No. 3 R. Ambrose, rigging up. Cane Run Petroleum Co.'s No. 14 R. E. Jackson, 10-bbl. well in Jett sand. Maceo district: L. E. Maxson's No. 1 S. T. Boone, dry hole, total depth 957 ft. Utica district: J. C. Ellis' No. 2 fee, drilling deeper from 1,425 ft. C. E. Daugherty's No. 5 C. W. Howard, 25-bbl. well in Jones sand, total depth 1,222 ft. Wanna Oil Co.'s No. 1 L.&N. right-of-way, estimated 150-bbl. well in Jett and Jones sands, total depth 1,230 ft. C. E. Daugherty's No. 6 J. A. Leet, spudding in. J. C. Miller's No. 6 Gus Morgan, spudding in. Farmer & Chenault's No. 4 Martin Weaver, 50-bbl. well in Barlow sand, total depth 1,426 ft. Stewart, Snyder & Sargent's No. 3 Dr. A. A. Westerfield, drilling at 600 ft. Three

(Continued on Page 76)

Field Work in Indiana Gets Poor Results in Oil

EVANSVILLE, Ind., Dec. 4.—One oil well, two gas wells and six dry holes comprised the very unfavorable record of field operations in Indiana in the past week. Several weeks have passed without any large completions in the new southwestern fields, and during that time wildcatters have been experiencing nothing but discouragement.

In Pike County W. O. Allen and others' No. 1 Electric Shovel Coal Co., SW SE SE Section 18-2s-7w, was dry and abandoned at 1,566 ft. Ste. Genevieve lime top was at 1,327 ft., water at 1,496-1,517 ft. and 1,520-25 ft.

In Spencer County Edward Lorsh deepened No. 1 fee, SW cor. NE SW NW Section 12-6s-4w, from 729 ft. to 895 ft. but found no oil or gas and abandoned the hole. J. S. Albertson's No. 1 Ray, NW SW SE Section 11-6s-4w, Jackson sand at 630 ft., dry and abandoned. Kentucky Natural Gas Co.'s No. 1 Axton-Bumpass, C S½ SW NE Section 30-7s-6w, gas sand at 871-81 ft., 10,998,000 cu. ft. of gas., completed.

In Posey County Illind Oil Co.'s No. 3 Struh, NE NE SE Section 1-7s-12w, was swabbing at the rate of 2 bbl. of oil per hour from pay at 1,729-48 ft., but had not yet been completed. Superior Oil Co.'s No. 14 New Harmony, SE SW SW Section 10-5s-14w, was completed with an estimated flow of 100 bbl. per day through ¼-in. choke from pay at 2,183-2,213 ft.; well shut in. Superior's No. 15 New Harmony, SW NE SW Section 10-5s-14w, flow estimated at 50 bbl. per day through ¼-in. choke from 2,199-2,204 ft., shut in.

In Daviess County D. L. Morris and others' No. 1 Daviess County Land, NW cor. NE NE NE Section 17-2n-5w, hole full of water at 810-14 ft., and abandoned.

In Vigo County Ben Nation's No. 1 Boyce, SE SE SW Section 33-11n-9w, dry and abandoned at 2,195 ft.

In Decatur County Hoosier Public Utilities Co.'s No. 1 Schoettmer, C SW NE Section 14-9n-8e, was abandoned as dry in Trenton rock at 925-50 ft., total depth.

In Pike County Walker and others' No. 1 Hancock, SE NE NW Section 30-1n-6w, drilling at 670 ft. Same operators' No. 1 Ganison, NW NE NE Section 30-1n-6w, drilling at 460 ft. Same operators' No. 1 Johnson, NW SE SE Section 19-1n-6w, drilling at 240 ft. Same operators' No. 1 Colvin, NE SE NW Section 30-1n-6w, drilling at 325 ft. Walker and others' No. 1 Denam, C SL NW NE Section 3-1n-6w, drilling below 55 ft.

In Dubois County Apex Drilling Co. and others' No. 1 Grant, SW SW NE Section 28-1s-3w, spudded and shut down. Damron Brothers' No. 4 Humbert, C N½ SW SW Section 25-1s-4w, 660 ft. from west and 300 ft. from north line SW SW Section 25-1s-4w, location.

In Perry County H. J. Baker and others' No. 1 Peters, SE cor. NW NW Section 11-5s-12w, small showing at 253 ft., drilling at 300 ft.

In Spencer County Damron Brothers' No. 1 Carder, NE NE NW Section 31-5s-5w, spudded. Charles E. Dice's No. 3 Grass, SE cor. SW NE NE Section 11-6s-4w, location. B. K. Maitland's No. 1 Gross, SW NW SE Section 11-6s-4w, location. Major Oil Co.'s No. 1 Haynes, SE SE NE Section 11-6s-7w, drilling at 1,720 ft. Damron Brothers' No. 1 Smith, NE SW NE Section 19-7s-6w, drilling at 200 ft. Schnell, trustee's No. 1 Biggerstaff, SW SW SE Section 6-7s-7w, drilling at 200 ft. Schnell, trustee's No. 1 Crowder, NW SW NW Section 7-7s-7w, spudded.

In Vanderburg County Vanderburgh Oil Corp.'s No. 1 Hornby, SE NW SW Section 33-5s-10w, spudded a McClosky test. Ben Lambert Drilling Co.'s No. 1 Force, SW NW SW Section 7-7s-11w, rig up. Volkman and others' No. 1 Heidt, C E½ NE SW Section 18-7s-11w, shut down for orders after plugging back from

(Continued on Page 68)

Kansas Developments

By
DAL DALRYMPLE

Find Oil in Lyons Gas Pool; Barton Discovery Completed

Discovery of oil in the Lyons gas pool of Rice County, opening of a new pool in Barton County and extension of other Kansas areas featured field operations in that state the past week.

Derby Oil Co.'s No. 1 Williams, C NW NE Section 14-20-8w, on the south side of the Lyons gas field, made initial daily potential of 102 bbl. of oil from Wilcox sand at 3,274-84 ft., total depth. Location is about 1½ miles southeast of the town of Lyons, thus being the nearest oil well to the Rice County seat. The oil well is ¼ mile south of nearest gas production in the field. Seven gas wells have been completed in the field, with the spacing plan including both 40 and 80-acre locations.

Wilson, Fortier and Alpine Oil & Royalty Co.'s No. 1 Duncan, CSL SE NW Section 8-20-11w, was completed to open a pool 1½ miles southeast of the town of Ellinwood, Barton County. It made depthograph potential of 4,932 bbl., with top allowable potential of 3,000 bbl., after acidizing. Production was from Arbuckle lime topped at 3,297 ft., total depth 3,308 ft.

Cities Service Oil Co.'s No. 2 Smith, NW NW SE Section 16-21-11w, Stafford County, gave promise of extending the South Snider pool ½ mile northeastward. It found saturation in Arbuckle lime at 3,406-10 ft., total depth, and standard tools were being rigged up preparatory to drilling in.

Frank Hollow's No. 1 Thomas, C S½ SE SE Section 3-12-18w, extended the Walters area, Ellis County, ½ mile westward when it found oil in Arbuckle lime at 3,652-58 ft., total depth. Oil rose 2,250 ft. in the hole in 3½ hours.

The Rooks County sector of the Burnett pool was extended ¼ mile eastward at Bay-Newfoundland's No. 1 Hahn, SW SW SE Section 31-10-17w. It made daily potential of 145 bbl. of oil from Arbuckle lime at 3,623 ft.

Jock Garden's No. 1 Browning, C E½ NE NW Section 7-19-9w, extended the Haferman pool, Rice County, ½ mile southward. Oil rose 900 ft. in the hole from Arbuckle lime at 3,267 ft.

Skelly Oil Co.'s No. 1 Anderson, CSL SW NW Section 8-15-13w, ¼ mile northwest of production in the Coralena pool, Russell County, made daily potential of 1,110 bbl. of oil from Lansing lime at 3,028 ft.

Among the Wildcats

B. B. & M. Drilling Co., G. F. Johnson, and others' No. 1 Krier, CEL SE SE Section 30-16-11w, Barton County wildcat 1½ miles southwest of the Prusa pool, was completed in Gorham pay at total depth of 3,325 ft., with initial potential of 446 bbl. of oil daily. On previous test it was rated at 360 bbl. daily, after swabbing 120 bbl. in 4 hours. On completion test it pumped 148 bbl. in 8 hours. Gorham zone was topped at 3,307 ft., with pay at 3,322 ft.

E. B. Shawver and others' No. 1 Henderson, C W½ NE NE Section 4-33-6, wildcat in Cowley County, found Mississippi lime at 3,198-3,536 ft., Arbuckle lime 3,599 ft., had a hole full of water at 3,640 ft., total depth, plugged back to 3,604 ft., acidized but was not tested and was dry and abandoned.

C. M. Fitzwilliam and others' No. 1 Whortan, NE NE SW Section 4-33-14, wildcat south of the Red Bank pool, Montgomery County, topped Arbuckle lime at 1,681 ft., had a small showing of oil with water at 1,714-17 ft., total depth, and was abandoned.

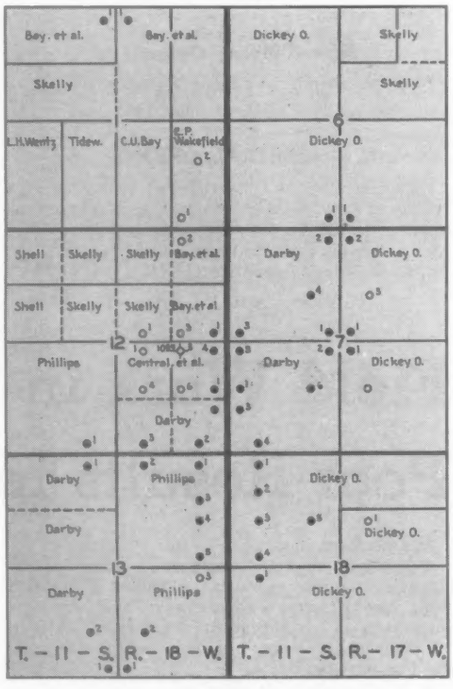
Wildcat first reports of the week included: Davidson & Flack's No. 1 Wilhite, NE NE SW Section 16-27-7, Butler County, building rig; Cities Service Oil Co.'s No. 1 Padlena, SE SE SE Section 26-14-10w, northwestern Ellsworth County, drilling below 220 ft.; Westgate-Greenland Oil Co.'s No. 1 Chindberg, C N½ NE SE Section 18-18-1w, McPherson County, drilling below 475 ft.

Completions and new operations in proven areas were as follows:

Russell County

Spencer and Derby Oil Co.'s No. 2 Atherton, S½ NE NE Section 30-13-14w, Atherton area, Russell County, was bottomed at 3,300 ft. in Arbuckle lime and made potential of 959 bbl. of oil.

Texon Oil Co.'s No. 11 Letsch, SE NE SW Section 26-14-13w, Letsch pool, was bottomed in Lansing lime at 2,872 ft., treated with 5,000 gal. of acid and pumped 606 bbl. of oil in 8 hours, making potential of 1,818 bbl.



Midcontinent Map Co., Wichita

The South Burnett pool in Ellis County, an area of big producers, is one of the busier fields in Kansas. Map shows new locations and tests getting under way

Aylward Production Co.'s No. 2 Solbach, NW SE NE Section 31-14-14w, Big Creek district, topped Lansing lime at 2,947 ft. and oil rose 2,700 ft. in the hole in 2 hours. The well was treated with 5,000 gal. of acid and pumped 587 bbl. of oil in 8 hours, with a potential of 1,762 ft. Total depth was 3,040 ft.

Skelly Oil Co.'s No. 1 Anderson, C S½ SW NW Section 8-15-13w, Coralena pool, had Lansing pay from 2,976 ft. to 3,004 ft., total depth 3,248 ft. It pumped 370 bbl. of oil in 8 hours and was rated at 1,110 bbl. initial potential.

Shell Oil Co., Inc.'s No. 1 Sellens, SW SW SW Section 33-15-13w, Trapp pool, was bottomed in Arbuckle lime at 3,330 ft. and made depthograph potential of 1,639 bbl. of oil.

New work in Russell County: Haynes & Anchusetz's No. 1-A Maag, NW SW SW Section 7-15-13w, rig; W. I. Southern's No. 4 Trapp, C E½ W½ NE Section 29-15-13w, rig; Cities Service Oil Co.'s No. 4-A Mai, C S½ S½ SW Section 24-15-14w, drilling below 350 ft.; H. L. Stuart and others' No. 2 Spicer, NW NW SW Section 21-11-15w, moving in spudder; W. C. McBride's No. 5 Jellison, NW NW SW Section 19-13-14w, rig; National Refining Co.'s No. 2 Hall, NE SE SE Section 21-14-14w, moving in material; Aylward Production Co.'s No. 1 Rusch, SW SE SE Section 30-14-14w, rig; Alva Billings' No. 4-A Herbel, NW NE NW Section 35-14-14w, pits; Phil-Han and others' No. 1 Mills, SE SW SW Section 12-14-15w, moving in material.

Estimated Daily Production

Estimated daily production for Kansas for the week ended December 2, and for the preceding week was as follows:

	Barrels	
	Dec. 2	Nov. 25
Oxford City	700	750
Burrton	10,950	11,050
Ritz-Canton	4,250	4,300
Graber	2,350	3,350
Hollow-Nikkel	2,200	2,250
Lerado	1,050	1,000
Voshell	1,600	1,650
Wellington	2,250	2,150
Ellsworth County:		
Lorraine	1,850	1,750
Other pools	1,860	1,785
Rice-Barton counties:		
Bloomer	3,700	3,700
Chase	3,650	3,900
Geneseo	3,050	3,400
Raymond	550	900
Silica	12,850	12,850
South Silica	2,500	2,550
Keesling	1,100	1,000
Wherry	3,600	4,100
Miscellaneous Rice	4,350	5,570
Miscellaneous Barton	10,865	9,950
Russell County	27,000	28,085
Sedgwick County	3,250	3,250
Ellis County:		
Bemis	6,700	6,550
Miscellaneous	5,000	5,555
Kingman County	675	680
Stafford County	8,185	8,270
Greenwood County	8,600	8,300
Eldorado	7,750	7,500
Other fields	34,815	38,105
Total Kansas	177,250	184,850

Rice County

Shell Oil Co., Inc.'s No. 4-B Sherman, NE NE NE Section 16-19-9w, Cramm pool, Rice County, found Arbuckle lime at 3,206-41 ft., total depth, swabbed 161 bbl. of oil in 4 hours and made echometer potential of 2,924 bbl. daily.

Gerbrand-Pulse Drilling Co.'s No. 1 Renollet, NE NE NE Section 36-20-8w, Wherry pool, reached top of conglomerate pay at 3,312 ft., total depth 3,317 ft., pumped 486 bbl. of oil in 8 hours and made potential of 1,459 bbl.

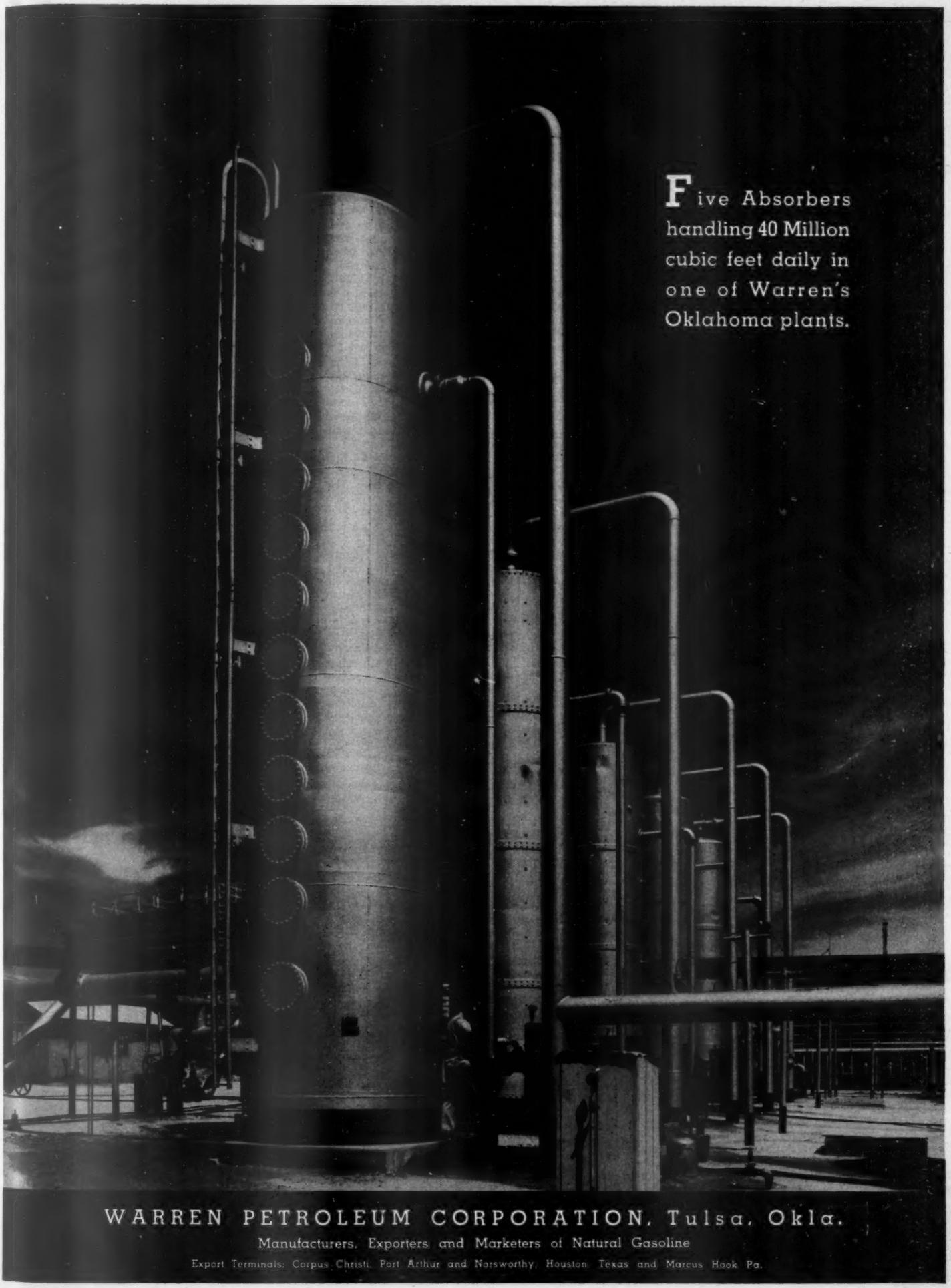
Skelly Oil Co.'s No. 2 Smith, C S½ SW NE Section 28-19-10w, Silica pool, was completed in the Arbuckle lime at total depth of 3,311 ft., pumping 15 bbl. of oil daily.

First reports for Rice County: Gulf Oil Co.'s No. 2 Drake, NW NW SW Section 31-20-7w, rigging rotary; Cities Service Oil Co.'s No. 2 Gossman, C E½ SW SE Section 5-21-7w, building rig; Mid-Plains Production Co.'s No. 2 Engelland, NW NW SE Section 15-21-7w, drilling below 1,295 ft.; C. L. Carlock's No. 3 Culbertson, E½ SE SE Section 22-21-7w, rigging up rotary; Cities Service Oil Co.'s No. 1 Roelfs, E½ SE NE Section 26-18-10w, moving in material.

Ellis County

Two completions were reported in Ellis County, in the Bemis and South Burnett pools, respectively: Lario Oil & Gas Co.'s No. 3-C Cress, NE SW SW Section 13-11-17w, made echometer potential of 5,024 bbl. of oil, with a maximum allowable of 3,000 bbl. Arbuckle lime was found at 3,350-57 ft., total depth.

Dickey Oil Co.'s No. 1 Kollman, C N½ SW NE Section 18-11-17w, had Arbuckle lime at 3,360-62 ft.,


Five Absorbers handling 40 Million cubic feet daily in one of Warren's Oklahoma plants.
WARREN PETROLEUM CORPORATION, Tulsa, Okla.
Manufacturers, Exporters and Marketers of Natural Gasoline
Export Terminals: Corpus Christi, Port Arthur and Norsworthy, Houston, Texas and Marcus Hook Pa.

and oil rose 2,000 ft. in the hole in 1 hour. Depthograph potential rating was 6,078 bbl. of oil daily, maximum allowable 3,000 bbl.

New tests started: Bay Petroleum Co.'s No. 1-B Ridler, SE SW SE Section 1-11-18w, surface hole; Cities Service Oil Co.'s No. 6 Callahan, C N½ N½ NW Section 24-11-17w, drilling below 245 ft.; Trigg Drilling Co.'s No. 1 Baker, C E½ NW NE Section 15-12-18w, rigging up rotary.

Cowley County

W. M. McKnab's No. 3 Hittle, NW NW NE Section 21-31-4, Hittle pool, Cowley County, found Arbuckle lime at 3,360-64 ft., total depth, and pumped and flowed 1,918 bbl. of oil in 27 hours.

Texas Co.'s No. 10 Hittle, SE NW SE Section 21-31-4, was bottomed in Arbuckle lime at 3,320 ft.; flowed 399 bbl. of oil in 2 hours and made 24-hour potential of 6,320 bbl., pumping and flowing.

Jock Garden's No. 1 Tomkinson, NE SW NW Section 28-31-4, was completed in Arbuckle lime at 3,331-34 ft., total depth, and pumped 457 bbl. of oil daily.

Texas Co.'s No. 6 Goodrich, NE SW SE Section 21-31-4, was a location. Barnsdall Oil Co.'s No. 1 Sanford, SE SE SW Section 28-30-4, was rigging up rotary.

Barton County

Stanolind Oil & Gas Co.'s No. 13 Schartz, S½ N½ NW Section 2-20-11w, Silica area, had Arbuckle lime at 3,280-91 ft., total depth. It pumped 213 bbl. of oil in 8 hours and made 24-hour potential of 638 bbl.

Shell Oil Co., Inc.'s No. 1-A Schlessiger, SE NE SE Section 13-20-12w, Marchand area, topped Arbuckle lime at 3,309 ft., was bottomed at 3,342 ft. and pumped 146 bbl. of oil and 125 bbl. of water a day.

Deering-Marshall's No. 1 Weber, NE NE SE Section 14-16-12w, was rigging up. W. C. McBride's No. 1 Soderstrom, SE NW NE Section 21-17-13w, was building rig. Aylward Production Co. and Vernon Oil & Gas Co.'s No. 1 Bird, C SW NW Section 33-18-15w, was a location. Gulf Oil Corp.'s No. 2-B Spanier, SW cor. Section 12-20-11w, was rigging rotary.

Butler County

Smith & Polhamus' No. 1 Cannon, NW NW NW Section 28-26-7, was rigging up machinery.

Ward McGinnis' No. 1 Cundoll, SE SE NW Section 12-24-4, was a location.

Stafford County

Stanolind Oil & Gas Co.'s No. 5 McComb, S½ SW NW Section 12-24-11w, pumped 288 bbl. of oil in 8 hours and made potential of 897 bbl. Top of Misener pay was 3,728 ft. Total depth was 3,744 ft.

Same company's No. 6 McComb, C N½ SW NW Section 12-24-11w, was rigging up rotary.

McPherson County

Continental Oil Co.'s No. 11 Goering, NW NW SW Section 29-21-1w, McPherson County, Graber pool, topped Hunton pay at 3,270 ft., total depth 3,300 ft., and pumped 353 bbl. of oil daily.

Rooks County

Bay Petroleum Co.'s No. 1 Hahn, SW SW SE Section 31-10-17w, Burnett pool, Rooks County, was acidized and pumped 145 bbl. of oil daily. Total depth in Arbuckle lime was 3,623 ft.

Sedgwick-Sumner Counties

Ace Oil Co.'s No. 2 Warren, SW NE NE Section 21-25-1, Goodrich area, Sedgwick County, had hole full of water at 3,395 ft., bottomed at 3,415 ft., and was abandoned.

Stelbar Oil Corp.'s No. 1 Potucek estate, C S½ SW SW Section 16-33-2, Ruttner area, Sumner County, found pay sand at 3,435-40 ft. and pumped 23 bbl. of oil and 37 bbl. of water in 24 hours. At 3,500 ft., total depth, the hole filled with water and it was abandoned.

Oko Oil Co.'s No. 25 Kelly, SW NE SW Section 14-23-13, Coffey County, rigging up machinery.

Loriaux and others' No. 2 Bevins, NW SW SE Section 21-17-4, Marion County, was moving in material.

Forest City Basin Activity

ST. JOSEPH, Mo., Dec. 4.—Work was started at three wildcats in the Forest City basin the past week, two in Missouri and one in Iowa. One well was producing and two being drilled in Richardson County, Nebraska, and a well in the Kansas sector of the basin was being watched with considerable interest.

Phillips Petroleum Co.'s No. 1 Creston, C SE NE Section 31-71-30w, south of the town of Creston, in Union County, Iowa, was spudded November 28, the birthday anniversary of Frank Phillips, chairman of the board of the Phillips company.

In Missouri, R. J. Reinke and W. H. Oberthier spudded their No. 1 Campbell, C NE¼ Section 18-61-12w, Knox County. Roach & Vincent's No. 1 Dillingham, C NE SW Section 16-53-34w, Platte County, was spudded. Bob Miller's No. 1 Corrough, C SE SE Section 24-57-35w, east of St. Joseph, Buchanan County, topped Mississippi lime at 1,201 ft., verified by Missouri Geological Survey, and at that point the test was running a little more than 30 ft. high, with a reverse dip in the Mississippi, also verified by geologists. Ten-inch casing was set at 1,393 ft., following caving in shale below 830 ft., when the wildcat found water in dolomite at 1,385 ft. J. E. Dunn's No. 1 Campbell, SW NE NW Section 33-64-17w, Carroll County, was reported abandoned. New operations included J. W. Ettington and others' No. 1-A Clark, NE NE SE Section 8-63-14w, Adair County, drilling below 160 ft., and same operators' No. 1 Kapps, SW cor. Section 31-64-15w, Adair County, drilled 110 ft.

Operators have withheld information following interesting developments at E. W. Mosbacher and others' No. 1 McLaughlin, SW NE NW Section 4-10-20, Jefferson County, Kansas. It had first important gas showing in Bartlesville sand topped at 1,426 ft. Gas gaged 1,500,000 cu. ft. at 1,430 ft., 4,000,000 cu. ft. at 1,434 ft., and 8,000,000 cu. ft. at 1,455 ft. Casing was cemented to kill the gas and the test was drilled into Mississippi lime at about 1,500 ft. It was reported 6-in. pipe was being set, but depth of casing-seat was not given.

It was said drilling deals were in the making in Brown County, Kansas, and announcements are expected soon.

Two wells were being drilled in Richardson County, Nebraska, where first oil in the basin was found. One and one-half miles south of the discovery well, Pawnee Royalty Co.'s No. 1 Meyer, C NW NW Section 24-1n-15e, was drilling below 600 ft. About 15 miles west of the discovery, Uhri & Stephens' No. 1 Stauffer, SW SW NE Section 22-1n-13e, had shut off water with surface casing to 60 ft. and was drilling ahead. The Nebraska discovery, Pawnee Royalty Co.'s No. 1 Boice, C NE NE Section 18-1n-16e, near Falls City, had produced 785 bbl. of oil at the end of the first 13 days of the official test. Operators are holding production to about 60 bbl. daily, pumping only 6 hours daily. The State of Nebraska will pay $15,000 bonus when 50 bbl. have been produced for 60 consecutive days.

Indiana Fields

(Continued from Page 65)

1,932 to 1,844 ft. It has sand at 1,800-12 ft. that had not been tested.

In Daviess County Fred L. Hartman was drilling at 1,400 ft. in No. 1 White, NW NW SW Section 22-2n-7w.

In Knox County Newton Pipe Line Co.'s No. 1 Like Donation 171, Township 2n-9w, was drilling at 1,605 ft. M. I. T. Syndicate's No. 1 McHenry, Donation 214, Township 5n-9w, drilling at 2,800 ft. M. I. T. Syndicate's No. 1 Keith, SW SW SW Section 5-5n-9w, drilled to 974 ft. and shut down. Hart & Williams' No. 1 Montgomery, C NE SW Section 28-5n-7w, drilling at 234 ft.

In Sullivan County Niagaran Oil Co.'s No. 6 Riley, NW NE NW Section 33-8n-10w, drilling at 440 ft. E. L. Shandy and others' No. 2 Osburn, NE cor. NW SW SE Section 12-8n-10w, drilling at 503 ft.

In Clay County Dorsey Oil Co.'s No. 1 Hickman, NW cor. SE SE Section 15-9n-6w, drilling below 400 ft.

In Vigo County Siosi's No. 1 Stufflebeam, C N½ NW SE Section 16-10n-10w, total depth 2,162 ft., running tubing to test.

In Gibson County Hulman and others' were drilling at 1,420 ft. in No. 1 Hollis, SE SE NW Section 36-2s-11w, Lane, Gray and others were shut down for orders in No. 1 McCarthy, NW SE NW Section 13-2s-11w, after plugging back from 2,200 ft. to 1,821 ft. A. L. Braden and others' No. 1 Simpson, SW cor. NW SE NE Section 19-3s-11w, has rig on the ground. W. F. Lacey and others' No. 2 Heston, SE NW NE Section 8-3s-13w, total depth 2,816 ft., set pipe at 2,750 ft., drilled plug and the hole filled with sulfur water; will be plugged back. Continental Oil Co.'s No. 1 Thrash, NW SE SW Section 18-3s-13w, 2,000 ft. of oil in the hole from Cypress sand at 2,467-2,527 ft.; will put on pump. Papoose Oil Co.'s No. 1 Cooper C, NE NE SW Section 18-3s-13w, set 5½-in. casing at 2,484 ft., total depth. Bander and others' No. 26 Cooper, SW cor. SE NE NE Section 24-3s-14w, shot with 10 qt. at 2,524-32 ft., cleaning out. Hollandsworth and others' No. 3 Cooper, NW cor. NE SE NE Section 24-3s-14w, shot with 20 qt. at 2,062-2,100 ft., cleaning out. Misener Baldwin and others' No. 1 New Harmony Bank, Aux Vases sand at 2,771-93 ft., shut down at 2,796 ft.

In Posey County George Harsh, Jr., and others' No. 1 Keck, NW cor. Section 35-3s-14w, on a 2-acre lot, is a location. Continental Oil Co.'s No. 1 Kleiderer, drilling at 1,600 ft. Hollingsworth and others' No. 1 Keck, NE SE NW Section 34-3s-14w, set pipe at 2,143 ft. after penetrating Tar Springs sand at 2,143-53 ft. Superior's No. 1 Mumford Royalty Co., NE SW NW Section 31-3s-13w, total depth 3,047 ft., show of oil and water from 2,796 ft. to the bottom, plugged back to 2,775 ft. and drilled out removable pipe at 2,570-85 ft.; bailing mud and a show of oil. Sun Oil Co.'s No. 1 Gettman, NW SW SE Section 35-6s-12w, drilling at 800 ft.

In Marion County C. E. Jefferson's No. 1 Indianapolis Water Co., NE cor. SW¼ Section 15-16n-3e, Trenton lime top at 876 ft., shot with 40 qt. at 876-92 ft., testing; a small show of oil was reported. C. E. Jefferson was drilling below 125 ft. in No. 1 F. L. Carter estate, SW SW NE Section 15-16n-3e.

In Jay County C. J. Brinkerhoff, NW NE NE Section 21-24n-14e, spudded. Ellen K. Burke's No. 1 Outcalt, C W½ SW Section 24-22n-14e, drilling at 376 ft.

In St. Joseph County Robert Alan Crude Oils' No. 1 Sones, NE SW SE Section 20-38n-4e, materials in.

Ohio Fields

(Continued from Page 65)

of gas, open flow, from the second Berea at 1,684 ft. In Fraction 36 Ohio Fuel Gas Co.'s No. 2 H. A. Pinkerton was deepened from the Stray sand to the second Berea for 160,000 cu. ft. of gas, sand at 1,569-83 ft.

Ashland County, Lake Township, Robinson and others' No. 1 Mathies Kopp, Section 16, is a 1-bbl. pumper in the Berea at 690 ft.

Guernsey County, Valley Township, E. W. Salladay's No. 1 J. E. Meighen, Section 6, found the Berea dry, total depth 1,212 ft.

Hocking County, Ward Township, Preston Oil Co.'s No. 175 Sunday Creek Coal Co., Section 12, was shot in the Clinton sand and is a 10-bbl. well, sand at 3,642-81 ft.

Knox County, Butler Township, Ohio Fuel Gas Co.'s No. 1 J. D. Lepley, Section 6, was dry in the Clinton, total depth 3,011 ft. Clay Township, Meyer Levin and others' No. 3 Allie Clutter, Section 25, has 65,000 cu. ft. of gas in the Lima at 2,206-18 ft.

Licking County, Newark Township, Lachnette and others' No. 1 George Webber, north center part of First quarter, is a gas well in the Clinton gaging 730,000 cu. ft. open flow. Fallsbury Township, Kuntz-Hulse, Inc.'s No. 1 Eli Fry, Section 12, made 20 bbl. of oil in the first 24 hours after a shot in Clinton sand at 3,060-3,120 ft.

Noble County, Beaver Township, Yoker Valley Oil & Gas Co.'s No. 3 H. G. Long, Section 33, gaged 1,000,000 cu. ft. of gas, open flow, from Berea sand at 1,593-1,605 ft. Stock Township, J. E. Lumbatis Co.'s No. 1 W. F. Pepper, Section 29, has an open flow of 100,000 cu. ft. of gas from Berea sand at 1,900-12 ft.

Perry County, Madison Township, Atha Co.'s No. 1 Eunice Barnett, Section 3, is dry in the Clinton sand, total depth 3,323 ft.

Stark County, Jackson Township, Lyons and others' No. 1 Adam Rohr, Section 20, has 300,000 cu. ft. of gas from Clinton sand at 4,175-88 ft.

Tuscarawas County, Brendel Producing Co.'s No. 1 Michael Boltz, Lot 18, Second quarter, gaged 160,000 cu. ft. of gas from the Berea at 1,188 ft.

Vinton County, Richland Township, Kelch Brothers' No. 1 Dora Betts, Section 3, is a small gas well in the Hamden sand, total depth 812 ft.

Washington County, Fearing Township, Lawrence Brothers' No. 1 Charles Kuntz, Lot 104, had a small oil showing at 971-85 ft. and was abandoned at 997 ft.

Lima Field

Auglaize County, Clay Township, Ira Price, on fee property, in Section 6, was abandoned at 1,650 ft. A small oil showing was had in the Trenton at 1,421-58 ft.

Putnam County, Perry Township, Nicholas Masters and others' No. 1 Flora Barbage, Section 27, had top of Trenton at 1,336 ft., with some gas at 1,363 ft., and oil showing at 1,373 ft., still drilling.

Texas and Louisiana Gulf

By
NEIL WILLIAMS

Paradis Structure Enhanced By Discovery of Deeper Pay

HOUSTON, Tex., Dec. 4. — The Paradis field, St. Charles Parish, coastal Louisiana, opened as a distillate field in June, promises to be one of the most important structures in the district as the result of the completion of Texas Co.'s No. 2 L. L. and E. Paradis, the second well on the structure. It was drilled to a total depth of 11,170 ft., and production was obtained by perforating casing opposite oil sand at 10,295-10,340 ft. During the first 2 hours after the well had cleaned itself of wash water, it flowed at the rate of 17 bbl. of 38.3-gravity oil per hour through a ⅜-in. choke, with tubing pressure 1,490 lb.

The completion opens production from a new sand, approximately 425 ft. deeper than that of the discovery well which was completed at 9,895-9,915 ft. The discovery sand was logged in the second well as sandy shale showing saturation, while additional oil sands were logged as follows: 10,095-89 ft., 10,251-60 ft., 10,353-70 ft., 10,410-20 ft., 11,013-26 ft., gas sand 11,032-37 ft., and sand and shale showing oil at 11,110-22 ft.

Location of the field is near the small town of Paradis on a large block centering around Section 6-14s-20e.

New Oil County

Pan American Production Co.'s No. 1 Mills, the discovery well of La Place field, St. John the Baptist Parish, flowed 133 bbl. of 61.3-gravity distillate per day through a ¼-in. bottom-hole choke and a ½-in. surface choke. Tubing pressure was 725 lb. and casing pressure 650 lb. The well was completed through perforated casing opposite sand at 8,115-22 ft. The completion opens the first production in the parish. Several sands were logged in the well from 8,000 to 10,000 ft., but drill-stem testing proved unsatisfactory.

Tide Water Associated Oil Co.'s No. 6 Buras Levee Board, about 1 mile west of production at the Venice dome, Plaquemines Parish, is bottomed at 10,745 ft., and the well is testing through perforated casing at 10,496-10,664 ft. Should it fail to produce from this sand, the hole will be plugged back and a test made at 10,160-10,230 ft. This is the deepest test drilled on the flank of the structure.

In the North Elton field, Allen Parish, Stanolind Oil & Gas Co.'s No. 1 Jenkins, Section 23-6s-3w, ½ mile southeast of the discovery well, made a drill-stem test at 7,412-18 ft., and the well showed 950 lb. of working pressure and some distillate on a 12-minute drill-stem test. The hole is bottomed at 7,760 ft., and casing is being cemented for a production test at 7,489 ft.

In the Old Bayou Blue field, Iberville Parish, Superior Oil Co. is moving in material for No. 1 Schwing Lumber & Shingle Co. in Section 74-9s-10e.

In the Woodlawn field, Jefferson Davis Parish, Union Sulphur Co. is attempting to extend production about 1,500 ft. west as No. 1 Raymond Hebert is testing through perforated casing at 9,477-80 ft. On a previous test at 9,477-84 ft. the well flowed pipe-line oil, but the flow had to be killed because of salt-water intrusion.

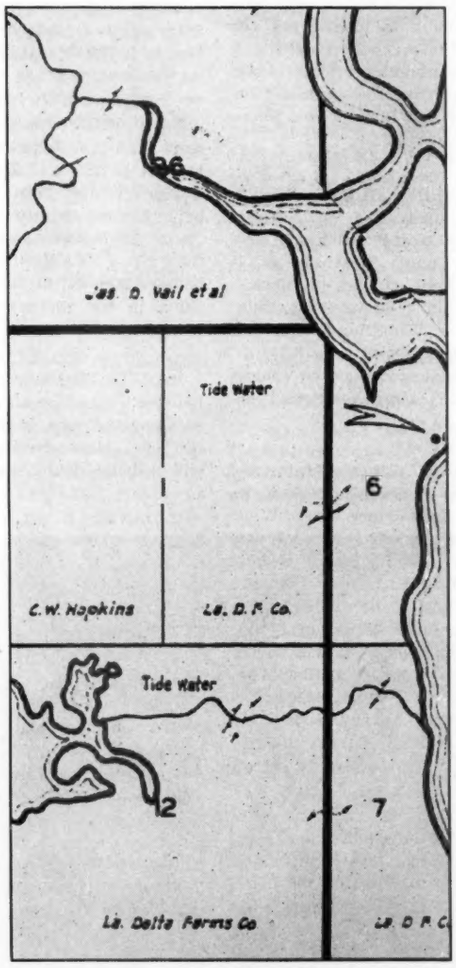
In the Lake Long field, La Fourche Parish, preparations were made by Fohs Oil Co. to complete No. 11 State-Lake Long. The hole is bottomed at 10,197 ft. and 7-in. casing was cemented at 9,865 ft. A successful completion would extend the field to the northeast.

Tide Water Associated Oil Co.'s No. 1 Delta farm, a prospective pool opener located on the Bay Brussel prospect, La Fourche Parish, is bottomed at 10,576 ft. and the company is fishing for stuck drill stem. An electrical survey showed four possible oil and gas sands at intervals from 8,748-9,935 ft. Eleven sidewall cores in this interval showed sandy shale showing gas at 8,749 ft., oil sand at 8,913-17 ft., and sand and shale showing oil at 9,022-37 ft. Sand showing oil was logged at 9,703 ft., and gas sand at 9,748 ft. and 9,928 ft.

Texas Coast

The attempted blowout of two deep wildcats in Fort Bend County and the completion of an outpost well in the West Ranch field, Jackson County, featured developments along the Texas sector the past week.

Magnolia Petroleum Co.'s No. 1 R. G. Huntington, approximately 2½ miles northwest of Rosenberg, Fort Bend County, was being watched closely as it prepares to core below 8,274 ft. While coring at 8,256 ft. the well attempted to blow out, but was brought under control by closing the blowout preventer and pumping in 1,070 sacks of commercial mud. Three feet of shale having a gas odor was recovered in a core at 8,256-59 ft., and sandy shale with a slight odor of oil and stain was recovered in a core at 8,259-64 ft. This well topped the Discorbis Yeguaensis the previous week at 7,698-7,708 ft., and the Eponides Yeguaensis at 7,750-67 ft. The well is believed to be in the Vicksburg at the present depth and the outcome is expected to be known by next week.



Zingery Map Co., Houston

Plat of the Bay Brussell prospect, La Fourche Parish, coastal Louisiana, showing location of Tide Water Associated Oil Co.'s No. 1 Delta farms

In the eastern part of the county, in the Juliff area, Gulf Oil Corp.'s No. 1 Russel Brown was preparing to core ahead from a total depth of 8,380 ft. Nine feet of shale, with a few streaks of sand with an odor of oil, was recovered in a core at 8,370-80 ft., and when the drill-pipe was picked up the well started to blow. It is in the William Pettus Survey, east of the Thompson field.

On the Bryan Mount salt dome, Brazoria County, Texas Co. was attempting to test No. 8 Freeport Sulphur Co. The hole is bottomed at 3,031 ft. and 5½-in. casing was cemented at 2,450 ft. after the hole was plugged back to 2,486 ft. At the close of the week screen was being set. A drill-stem test in the sand section is reported to have recovered some oily mud and a small amount of working pressure.

West Ranch Extended

An increase in drilling operations in the West Ranch field, Jackson County, is anticipated following the completion of George Greer's No. 1 Ward, approximately 3,000 ft. east of production. This well logged a slight showing of gas in the 5,100-ft. pay, and the hole was deepened to the Vanderbilt pay, total depth 5,784 ft. Casing was perforated at 5,540-60 ft., and 5,530-38 ft., and the well flowed 8 bbl. of fluid per hour through a ⅛-in. choke. The fluid was 90 per cent pipe-line oil and the balance wash water. Tubing pressure was 740 lb. and shut-in casing pressure 1,950 lb. Since the discovery of this field, development has been confined to three companies. The present well is located outside of Magnolia Petroleum Co.'s large block in an area controlled by several independent operators.

Prospects of opening production in the Alvin area, Brazoria County, were not encouraging as Humble Oil & Refining Co.'s No. 1 Hiram Moore cored salt water in the Frio sand topped at 7,410 ft. Other geological markers were topped as follows: Discorbis 5,927 ft., Heterostegina 6,667 ft., and Marginulina at 6,883 ft. The well is coring in salt water sand below 7,680 ft.

Standard Oil Co. of Texas' No. 1-55 State, on the west side of the Cedar Point field, Chambers County, showed salt water with no oil or gas on a 15-minute drill-stem test at 3,580-86 ft. This well cored salt-water sand in the Frio formation at 6,250 ft. and the hole was plugged back after an electrical survey and sidewall cores showed favorable indications in sand at 3,585-97 ft.

In the Caplen field, Galveston County, Sun Oil Co.'s No. 3 Cade, about 1,200 ft. southeast of production, is testing through perforated casing at 7,209-15 ft. The hole is bottomed at 7,532 ft., with 7-in. casing cemented at 7,532 ft.

Two oil wells were added to the Lovells Lake field, Jefferson County. Stanolind Oil & Gas Co.'s No. 2-B Steinhagen perforated casing at 7,790-95 ft. and the well flowed 184 bbl. per day through a ⅛-in. choke. Humble Oil & Refining Co.'s No. 3-B Steinhagen perforated casing at 7,778-80 ft. and during a 24-hour gage the well flowed 199 bbl. through a ⅛-in. choke.

McDannald Oil Co.'s No. 1 Woodhouse, Citrus Grove area, Matagorda County, perforated casing at 3,750-60 ft. and was completed for a dry gas well, with tubing pressure and casing pressure equalized at 1,650 lb. The well is about 2 miles southwest of Continental Oil Co.'s No. 1 Savage, completed several months ago as a gas well.

The Martha field, Liberty County, was apparently

(Continued on Page 78)

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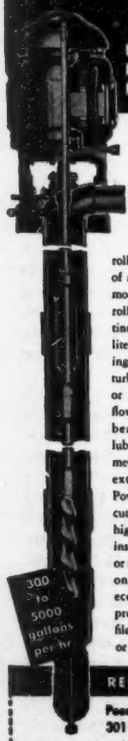

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Among the Drilling

JONES DRILLING CO., with Dilworth Hager, both of Dallas, Tex., is indicating a new well about a mile north of the little-explored Bolivar area in Denton County, North Texas. The well is the operators' No. 1 H. K. Armstrong, located in the L. Moore Survey, about a mile north of the nearest well in the pool which is a gas producer. With hole bottomed at 1,620 ft., a drill-stem test was run on shows found in the Pennsylvanian formation with recovery being 250 ft. of oil with some salt water. Exact source of water was not known; however, the operators considered the showing sufficient to merit setting of casing for completion efforts. Location is 330 ft. from the south and 700 ft. from the east lines of the Moore Survey, Abstract 824.

L. T. (BOBBY) BURNS, Wichita Falls, Tex., was nearing contract depth of 4,000 ft. at his wildcat in eastern Archer County, North Texas. It is his No. 1 Pennartz, Lot 19, Block 4, Clark & Plumb Survey, 2½ miles northwest of Windthorst. Last reported drilling depth was 3,935 ft. Burns has indicated that the wildcat will be carried below the original contract depth.

W. B. OMOHUNDRO, operator and contractor of Wichita Falls, Tex., received from Jack Prince, also of Wichita Falls, who handled the deal, contract for a 4,000-ft. rotary wildcat from Hall and Jordan Oil Co., of Oklahoma City, test to be drilled in the extreme northeast corner of Baylor County, North Texas. It will be the company's No. 1 Mrs. G. E. Blackman, located in the C SE NE Section 28, Block 3, H.&T.C. Survey. It is about one-half mile south of the Wilbarger County line and 3 miles northwest of Lake Kemp.

BILL HARDIN, Henderson County drilling contractor, has received the contract for a new test on the north end of the Flag Lake pool in Henderson County, eastern Texas. Test is for Hunt & McMillan, of Tyler, and will be their No. 3 A. R. Dillard, in the Henry Jefferys Survey. Announced several months ago, operators have been delayed, activity awaiting further development in the pool. Derrick is up at the location and contractor is moving in rotary for spudding, which is scheduled for early this week.

CARL SHORT, drilling contractor, Dallas, Tex., has opened a branch office at Houston and has placed Steve C. Womack, drilling superintendent, in charge of operations. Offices were opened at 720 Bankers Mortgage Building.

PARKER DRILLING CO. opened a field in coastal Louisiana with the completion of Pan American Production Co.'s No. 1 Mills. The well is located on the La Place prospect in St. John the Baptist Parish. Production was obtained by perforating casing at 8,115-22 ft.

E. R. KIRKPATRICK is drilling below 6,850 ft. on Sunray Oil Co.'s No. 1 Lockhart, a projected Wilcox test, located in the Chapel Hill area, Washington County, Texas.

N. W. HUNTER is preparing to spud No. 1 C. J. Rehmann, a flank test located on the San Felipe dome in Waller County, Texas. The well is being drilled jointly with John G. Mayo. In Newton County, W-M. Oil Co.'s No. 1 W. A. Smith is drilling below 7,400 ft. Location is east of Buna in the southern part of the county.

MARTIN THOMPSON is scheduled to move a rig to the Almeda area, Harris County, Texas, in the near future for No. 1 Alexander Sharp. The test will be drilled jointly with John Mayo.

McDANNALD OIL CO. completed No. 1 J. L. Woodhouse at the Citrus Grove area, Matagorda County, Texas, as a gas well, and the rig is being moved about 1 mile north for No. 1 G. W. Shell.

FALCON-SEABOARD Drilling Co. is drilling below surface casing on its No. 1 Powell, a projected 8,700-ft. wildcat located south of Hamshire in Jefferson County, Texas. In the Heyser field the company's No. 1 L. D. Williams is being completed as a producer at a total depth of 5,488 ft. A drill-stem test recovered several hundred feet of pipe-line oil.

JACK FRAZIER spudded No. 1 Darrington State Prison farm, a projected deep test located in the Juliff area, Brazoria County, Texas, which is being drilled jointly with John Mayo.

OIL WELL DRILLING CO., Dallas, located No. 1 Sikes, 660 ft. from the south and east lines of Section 10, Block A-25, P.S.L. Survey, Gaines County, Texas, in the south central part of the county. Located on farmout acreage from the Humble Oil & Refining Co., cellar and pit were being dug. The location is 9 miles west of Landreth Production Corp.'s No. 1

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Kirk, discovery well in Gaines County, and 11 miles southwest of production on the southeast edge of the Seminole area in central Gaines County.

SPRINGROSE DRILLING CO. and others have staked location for the No. 1 Swanson, a wildcat in the CWL NW NW Section 18-20-5w, 3 miles north and west of production in the Bornholdt pool of McPherson County, Kansas.

JOHNSON-KEMNITZ Drilling Co., Oklahoma City, and McGraw Oil Co.'s No. 1 Godfrey-Neff, in SW SE NE Section 14-6s-6e, in the Madill sector, in Marshall County, Oklahoma, was reported drilling ahead in shale at 4,221 ft. A sand was found at 4,162 ft. and cored from 4,167 to 4,183 ft. The recovery brought out showed 3 ft. of saturation, and the balance was dry. The crew then reamed the hole down and started drilling with a view of coring the next promising-looking horizon.

FAIN DRILLING CO., of Oklahoma City, has staked location for the No. 1 Louise C. Schnakenberg, in NE SE SW of Section 21-21n-4w, about 5 miles north of the Brown pool, Garfield County, Texas, and the crew was digging cellar and pits. Major oil firms have considerable acreage in the sector. Biggest holders are the Continental Oil Co. of Ponca City, which has an interest in the well; Indian Territory Illuminating Oil Co., of Bartlesville; and the Sinclair Prairie Oil Co. of Tulsa. Two other large holders in the area are the Stanolind Oil & Gas Co. and Amerada Petroleum Corp., and the new start is on a farmout from the two firms. It will be drilled to below 6,000 ft.

FAIN DRILLING CO. at Continental Oil Co.'s No. 1 Proctor, C NW¼ Section 28-10-20w, south of Canute, in Washita County, Oklahoma, was fishing for about 2,200 ft. of drill pipe.

ROBY DRILLING CO., National Bank of Tulsa Building, Tulsa, in No. 2 Community, NE NW SW Section 16-8-3e, the Louden pool in Fayette County, Illinois, was drilling around 900 ft. It is a north offset to the No. 1 Community, in SE NW SW Section 16-8-3e, which was recently completed for 150 bbl. daily from the Weiler sand at 1,575 ft., total depth.

McLESTER DRILLING CO. and others' No. 1 Akers fee, in the W. McClure Survey, Graham district, Young County, North Central Texas, topped the Smithwick sand at 3,331 ft., found gas at 3,333 ft., and was showing oil and gas at a total depth of 3,337 ft.

"Red" Myers and the morning crew on H. M. Harrel Drilling Co.'s wildcat near Bammell, Tex.

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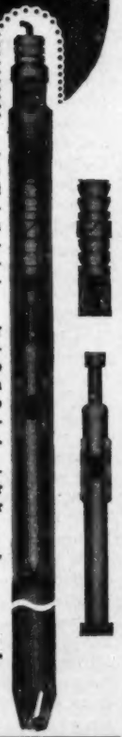

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Eastern Field Report

By STAFF CORRESPONDENT

Unusual Field Activity in Penn Grade Lower District

PITTSBURGH, Pa., Nov. 29. — Completions continued at a high rate in the lower eastern fields, during the past week they totaled 41, of which 7 were dry holes, 24 gas wells, and 10 oil wells, which included 1 fair producer in West Virginia and 1 in Southeast Ohio.

SOUTHEAST OHIO

The best oil well of the week in Southeast Ohio was McClay Brothers' No. 6 U. G. Porter, in Section 13, Fallsbury Township, Licking County. It was completed in Clinton sand at 3,098 ft., and 80 bbl. of oil was swabbed from it the day after it was shot.

In Coshocton County Allen Willy and others completed a test on the Allen Willy farm in Section 22, Pike Township, in the Clinton sand at 3,143 ft. It will make a 15-bbl. pumper.

In Cuyahoga County Benedum & Trees completed the second test on the Ford tract in Mayfield Heights Village in Newburg sand at 2,850 ft. It is a good gas well, also making some oil. In this field these operators are drilling at 1,930 ft. on the Dawson lease at 1,622 ft. in No. 1 Parker, and at 720 ft. in No. 1 McGurer.

In Hocking County Preston Oil Co. completed No. 1700 Sunday Creek Coal Co. in Section 12, Ward Township, in Clinton sand at 3,694 ft. It produced 5 bbl. of oil the first day after the shot.

In Knox County Sterl C. Brown and others completed No. 3 Clutter Burras in Section 25, Clay Township, in Niagara lime at 2,175 ft. It is a gas well gaging 52,000 cu. ft. a day.

In Medina County Marine Trust Co. completed No. 19-A W. H. Ripley, Section 13, Chatham Township, in Berea grit at 484 ft. It produced 7 bbl. the first day after the shot.

In Muskingum County Atha Oil Co. completed No. 3 C. C. Sherman in Section 17, Harrison Township, in Medina sand at 4,128 ft. It will make a 20-bbl. pumper.

SOUTHWEST PENNSYLVANIA

From Armstrong County, Pennsylvania, comes an interesting report of a fair oil showing in a gas field remote from other oil. In Cowanshannock Township and about 11,500 ft. south 30° W. of the center of the town of Rural Valley, Peoples Natural Gas Co. in drilling the test on the William Small farm struck oil and gas in the Tiona sand at 3,077-79 ft., and it made two flows estimated at 170 bbl.

As this well is among others drilled to that horizon it is not indicative that there is an oil pool in the vicinity but merely a small local lens. The hole is being cleaned of cavings.

In the same township Louden & Shilling completed a small gas well on the A. G. Schaeffer farm at 3,632 ft., in Bradford sand. The Apollo Gas Co. is drilling at 150 ft. on the Hulda Bleakney test; T. W. Phillips Gas & Oil Co., at 1,020 ft. in No. 1 Jacobs Boyer heirs, and at 2,143 ft. in No. 1 H. H. Harkleroad; Peoples Natural Gas Co., at 2,775 ft. in the France Harkleroad test; Equitable Gas Co., building rig for No. 2 D. W. Raraigh.

In Boggs Township, Armstrong County, Peoples Natural Gas Co. is down 225 ft. in the McCullough heirs test; John Wray & Co., at 1,875 ft. in No. 3 William Mateer; at 1,175 ft. in No. 2 Walter Upperman, and 320 ft. in No. 1 Warren Mateer. In Manor Township same operator is drilling at 1,090 ft. in the David Campbell heirs test. In Kittanning Township Edward Young is shut down at the Hugh Blair test. In Kiskiminitas Township Appollo Gas Co. is shut down at 1,100 ft. to test casing in No. 2 A. D. Tressler with the Injun sand at 812 ft. and 125,000 cu. ft. of gas at 1,041 ft.

Indiana-Clarion-Westmoreland

In Indiana County T. W. Phillips Gas & Oil Co. completed a gas well on the William Spence farm in Washington Township at 1,641 ft. with 150,000 cu. ft. a day from the Murraysville sand at 1,500 ft. In this township the same operator is drilling at 2,160 ft. in the B. S. Connor test and at 1,585 ft. on the Anna B. Spence farm.

In Cherryhill Township, Indiana County, Phillips is drilling at 3,270 ft. on the Federal Land Bank Co. lease and in Brush Creek Township at 2,460 ft. in the Samel Pool test. In White Township this operator is down 2,336 ft. on the Blanch Deyarmire farm and 2,143 ft. on the F. B. Loman test.

In Clarion County Phillips Gas & Oil Co. will start a test on the T. C. Blair farm in Porter Township. David Judson is rigged up on the Samuel Summerville farm. In Red Bank Township Owens Illinois Glass Co. has a rig up for a second test on the Lewis Keck farm. In Limestone Township O. H. Culbertson is building rig on the Edward Bowersox farm.

In Westmoreland County Kiski Valley Gas Co. is drilling at 450 ft. on the John Beighley farm and in Allegheny Township Peoples Natural Gas Co. is fishing for tubing at 1,000 ft. in the H. F. Burgman farm.

Fayette-Greene

In Fayette County Duquesne Gas Co. completed a small gas well on the Agnes Kirk farm in Nicholson Township at 2,479 ft. with the Fifth sand at 2,290-2,385 ft. In this township Greensboro Gas Co. is drilling at 2,484 ft. on the Maru Oravis farm, with Fifth sand topped at 2,362 ft. and 391,000 cu. ft. of gas at 2,377 ft. In Menallen Township J. H. Carnell on the Mike Uhrin farm drilled to 2,476 ft., through the Fifth sand, and it was dry.

In Greene County Peoples Natural Gas Co. deepened the well on the Taylor Fox farm in Whiteley Township to 3,206 ft. and the Bayard sand was at 3,154-66 ft., and 123,000 cu. ft. of gas at 3,156 ft. It was a former Gantz-sand gas well.

In Greene Township, Greene County, Union and Monongahela Oil & Gas Co. is rigging up a test on the Hartley and Ross farm. In Wayne Township Manufacturers Light & Heat Co. is moving in tools for No. 2 Haisie Tustin. In Richhill Township Natural Gas Co. of West Virginia is down 1,858 ft. on the Robert Burns farm. Equitable Gas Co. is drilling at 658 ft. in the W. L. Bebout test.

Washington-Allegheny Counties

In South Franklin Township, Washington County, Union Gasoline & Oil Corp. completed No. 826 C. T. Conn with in Little Dunkard sand topped at 1,015 ft.; total depth 1,085 ft. It is good for 4 bbl. a day.

In this township Foley & Williams completed the second test on the John G. Clark farm at 1,397 ft. with gas sand at 1,250-1,305 ft.; a final gage of 213,000 cu. ft. a day.

In Amwell Township Shivers and others completed the test on the Thomas J. Horne farm at 1,874 ft., with the Big Injun topped at 1,765 ft. and a volume of 1,300,000 ft.

In South Franklin Township E. H. and J. B. Tague are shut down on the J. O. Pedicord farm at 961 ft. with the Little Dunkard sand at 832 ft. and a show of oil. A. V. Lewis and others are drilling at 993 ft. in No. 2 L. W. Phelan.

In Carroll Township Eastern Gas Co. has started drilling on the Haywood farm. In South Strabane Township W. H. Davis is drilling at 825 ft. in No. 11 B. Davis. In North Strabane Township Keystone Drilling Co. is down 600 ft. on the Mary Means farm. In Somerset Township Equitable Gas Co. has a rig standing on the James Weir farm. In Morris Township Union Gasoline & Oil Corp. is down 2,520 ft. in No. 824 H. A. Day.

In Allegheny County Cox & Gibson completed a gas well on the William M. Patterson farm in South Fayette Township at 2,630 ft., Fifth sand, and it gaged 85,000 ft. a day. Homer Nixon is drilling at 1,735 ft. in the Joseph Hickman test and Dunn Brothers & Co. at 428 ft. in No. 2 J. J. Bowman.

Deep Tests

On Chestnut Ridge, Fayette County, New Penn Development Co., William E. Snee, and others topped Onondaga lime at 6,658 ft., on the Piedmont Coal Co. lease in North Union Township and at 6,662 ft. the cherty zone was believed struck. This would place the cherty zone at 4,484 ft. subsea compared with subsea 4,281 ft. in the Summit Hotel No. 1. The test was shut down at 6,682 ft. with a bailer stuck in the hole, and after recovery casing will be run.

On Laurel Ridge in Stewart Township, Fayette County, these operators and E. G. Mueller are shut down for casing at 630 ft. on the Gregg L. Neel farm. On Chestnut Ridge in North Union Township, Wasson & Co. have reached 930 ft. in the second test on the J. H. Sorg farm.

In Maryland, same operators are drilling at 4,280 ft. on the Humberson farm on the Accident dome in Garrett County. The gas struck at 3,750 ft. is now down to about 22,000 ft. a day.

WEST VIRGINIA

In Grant district, Ritchie County, West Virginia, Schultz Oil Co. (First National Bank of St. Marys) completed No. 6 T. C. Hammett in Squaw sand at 2,025 ft. and it produced 200 bbl. the first day.

In Roane County L. L. Reed and others completed No. 3 Hinzman in Harper district at 1,689 ft., with the Salt sand topped at 1,598 ft.; gas at 1,611-15 ft., and oil at 1,684-89 ft. It is good for 20 bbl. a day along with 250,000 ft. of gas without a shot. In Curtis district Curtis Oil & Gas Co. completed a 10-bbl. well on the E. E. Romine farm at 1,695 ft. with Salt sand topped at 1,676 ft., and pay at 1,690-95 ft.

In Wirt County S. W. Douglass completed a 2-bbl. well on the A. L. Blankenship farm in Spring Creek district at 1,055 ft., second Cow Run sand. In Burning Springs district W. C. Patterson drilled a dry hole on his fee to 1,554 ft., through the Injun sand.

Gas Wells

In Boone County Hope Natural Gas Co. completed No. 7908 on the Dora E. Hopkins farm in Washington district at 3,146 ft., Berea sand, and it gages 425,000 ft. a day before the shot. In Crook district the Pond Fork Oil & Gas Co.'s No. 14 fee, total depth 4,216 ft., Brown shale, gaged 500,000 cu. ft. a day.

In Calhoun County Hope Natural Gas Co.'s No. 1 Allen Hardman farm in Center district, total depth 1,965 ft., Injun sand, is good for 100,000 cu. ft. a day.

In Clay County Pittsburgh & West Virginia Gas Co.'s No. 7705 D. W. Sirk, total depth 2,075 ft., Big Injun sand at 1,917-2,072 ft., gaged 250,000 ft. a day.

In Gilmer County Massey & Jarvis on the William Harris farm in Glenville district, total depth 1,375 ft., Maxton sand, gaged 250,000 cu. ft. a day. In DeKalb district Bowser & Meyers drilled a dry hole on the A. B. Cooper farm through Injun sand to 2,135 ft.

In Kanawha County Ten-Mile Oil & Gas Co.'s No. 21 Margaret Y. Dickinson, in Elk district, total depth 2,510 ft., Berea and Weir sands, gaged 60,000 ft. a day.

In Lincoln County Owens-Libby-Owens' test on the George Mitchell farm in Jefferson district, total depth

(Continued on Page 85)

North Louisiana, Arkansas

By GEORGE WEBER

Wildcat Shows in Arkansas; Tinsley Well Tops the Sand

SHREVEPORT, La., Dec. 4.—A wildcat near Magnolia, Columbia County, Arkansas, held the spotlight in the past week, as it cored the Smackover lime and prepared to test a show of oil and gas in that horizon. In the same general area a second wildcat looked like a failure, and in the southwest corner of the county a third wildcat got under way. North Louisiana's two important deep tests, at Pine Island and Lisbon, were squeezing before retesting deep horizons. In Mississippi the Tinsley-field activity held up with the spudding of new wells and the issuing of permits for additional wells.

Standard Wildcat

Standard Oil Co. of Louisiana's No. 1 Petty Stave Lumber Co., a Columbia County wildcat, South Arkansas, was testing in porous oolitic lime, which showed oil and gas earlier in the week. The wildcat is in the SE cor. Section 4-17-21, 1½ miles northwest of the city of Magnolia and 1 mile southeast of Phillips Petroleum Co.'s No. 1 Askew, which several months ago was abandoned as dry.

The Buckner formation was topped at 7,736 ft., Smackover lime at 7,943 ft., and a 10-ft. section of porous oolitic lime showing oil was cored at 7,959-69 ft., total depth. The first test, scheduled for Friday, was postponed and further efforts to test were being carried out at last report.

To the east, 8 miles northeast of Magnolia, the Standard Oil Co. of Louisiana's No. 1 R. S. Warnock, Section 36-16-20, topped the Buckner at 7,388 ft., Smackover at 7,649 ft., and porosity in the latter formation was found at 7,692 ft. showing salt water. The wildcat was carried to a total depth of 7,744 ft., where it was shut down.

The Atlanta field of Columbia County, south of Magnolia, received a slight extension with completion of Tide Water Oil Co.'s No. 1 W. R. Clark, a west offset to the same company's discovery well.

The Dorcheat field, located in southwestern Columbia County, has four active tests. In addition, Gulf Refining Co.'s No. 1 Lewis, a wildcat 1½ miles north and 4 miles west of the field, has begun drilling below surface casing.

A show of gas in a fourth important wildcat in South Arkansas was reported from the Barnsdall Oil Co.'s No. 1 Cameron, in Section 36-19-17, 5 miles west of Junction City in Union County. A core at 4,149-66 ft. recovered 16 ft. 8 in. of hard sand showing an odor of gas. The test is drilling ahead below 4,220 ft.

Pine Island Test

Stanolind Oil & Gas Co.'s No. 131 Dillon, Pine Island deep test in Caddo Parish, was testing in a section which showed production possibilities. After plugging back to 9,981 ft. from a total depth of 11,418 ft., the casing was ripped at 7,546-62 ft. and the well tested mud. It was squeezed off and casing again ripped at 7,557-64 ft. A drill-stem test at that level showed recovery of salty drilling mud with a slight show of oil in 19 minutes. Operators were not satisfied with this, so casing was ripped further at 7,539-55 ft., and the section from 7,539-64 ft. was being retested. These horizons lie in the lower Marine formation.

In the new extension area of the Caddo field near Vivian, two wells are nearing the shallow pay sand in south and northeast offset position to the discovery well. Another located southeast of the discovery well has already been abandoned.

NORTH LOUISIANA COMPLETIONS

Caddo—Caddo Parish

Gerhig Co.'s No. 1 Tompkins, Section 18-21-15, salt water and abandoned, total depth 2,347 ft. McDonald & Campbell's No. 14 Youree, Section 7-20-14, dry and abandoned at 1,620 ft. Joe G. Strahan's No. 1-B Stiles, Section 32-20-16, pumping 17 bbl., total depth 2,386 ft. Waldron & Barnes' No. 1 Arkansas Fuel, Section 1-20-16, pumping 70 bbl., acidized with 3,000 gal., total depth 1,490 ft.

Rodessa—Caddo Parish

Suitana Drilling Co.'s No. 1 Bain, 198 ft. west, 480 ft. north SE cor. Section 4-23-15, 200 bbl., 28/64-in. choke, tubing pressure 30 lb., acidized with 5,000 gal., total depth 6,100 ft.

De Soto-Red River—De Soto Parish

Roosth & Genecov Producing Co.'s No. 1 Woolums, 990 ft. south, 330 ft. east NW cor. SW¼ Section 29-12-12, total depth 1,064 ft., abandoned.

Wildcat—Natchitoches Parish

Joseph E. Popkins & De Soto Brothers' No. 1 Peavy Wilson Lumber Co., C NW SE NW Section 36-7n-9w, abandoned at 3,080 ft.

Converse—Sabine Parish

K. R. Phillips' No. 1 Craig, 335 ft. south and 330 ft. east of NW cor. NW SE Section 22-9-13, pumping 12 bbl., total depth 1,936 ft.

Monroe—Union Parish

Interstate Natural Gas Co.'s No. 95 fee, Section 36-22-3, 2,000,000 cu. ft. of gas, rock pressure 1,020 lb., total depth 2,205 ft. Memphis Natural Gas Co.'s No. 1 Day, Section 24-22-3, 1,500,000 cu. ft. of gas, rock pressure 975 lb., total depth 2,200 ft. We Hope Gas & Oil Co.'s No. 6 Frost Lumber Co., Section 26-22-3, 2,000,000 cu. ft. of gas, rock pressure 1,010 lb., total depth 2,222 ft.

MISSISSIPPI

In the Tinsley field of Yazoo County, Mississippi, one east-side test is on the sand, and a northeast-edge well is beginning to drill. Union Producing Co.'s No. 2 Woodruff, the east-edge test, is due for early completion in the Woodruff sand of the Selma formation, and the Plains Producing Co.'s No. 1 Milner has spudded approximately ½ mile northeast of the nearest producing well. It was reported, but not confirmed, that the Union Producing Co.'s No. 1 Stevens, north-edge well and the sole producer in the Eutaw formation underlying the Selma, has gone to water.

EAST TEXAS BORDER COMPLETIONS

Wildcat—Marion County

A. F. Anding's No. 1 Hart, Gaines Coore Survey, set 5-in. casing 2,292 ft., pumping 25 bbl. T. Bell's No. 1 Moseley, D. Lane Survey, salt water and abandoned, total depth 2,595 ft.

Caddo—Marion County

R. W. Cosby's No. 1 Decker, J. G. Reaves Survey, pumping 25 bbl., total depth 2,400 ft.

Smithland—Marion County

J. D. Reynolds' No. 3-B Terry estate, W. Coore Survey, dry and abandoned 2,456 ft. Sutton and others' No. 1 Wash Taylor, B.B.B.&C. R.R. Survey A-54, dry and abandoned, total depth 2,312 ft.

ARKANSAS COMPLETIONS

(24-hour production)

Magnolia—Columbia County

Arkansas Fuel Oil Co.'s No. 1-B King, 1,980 ft. from NW cor. Section 21-17-20, 648 bbl., ¼-in. choke, tubing pressure 1,260 lb., casing pressure 1,200 lb., 6-in. casing set at 7,675 ft., perforated at 7,630-50 ft., total depth 7,675 ft. Standard Oil Co. of Louisiana's No. 1-A Longino unit, C NE SW Section 19-17-19, 984 bbl., 21/64-in. choke, casing pressure 1,175 lb., tubing pressure 1,175 lb., 6-in. casing 7,490 ft., total depth 7,576 ft.

Atlanta—Columbia County

Tide Water-Seaboard Oil Co.'s No. 1 W. H. Clarke, C SE NE Section 16-18-19, 130 bbl., 7/64-in. choke, casing pressure 1,725 lb., tubing pressure 1,555 lb., perforations at 8,245-52 ft. in 5½-in. casing set on bottom at 8,255 ft.

Production by Pool

Estimated daily gross production all companies week ended December 2:

NORTH LOUISIANA

Bellevue	470
Caddo light	5,180
Caddo heavy	2,430
Converse	550
Cotton Valley	*13,885
Cross Lake	5,745
De Soto and Red River	1,085
Elm Grove	290
Haynesville	2,740
Holly	85
Homer	2,745
Lisbon	5,245
Pleasant Hill	90
Rodessa	22,220
Sarepta-Carterville	†295
Sligo	1,325
Sugar Creek	315
Urania	2,500
Zwolle	2,450
Total	69,645

SOUTH ARKANSAS

Atlanta	395
Buckner	2,325
Champagnolle	1,350
Dorcheat	340
El Dorado	1,580
Lewisville	665
Lisbon	230
Magnolia	20,725
Miller County	300
Nevada	530
Rodessa	3,025
Schuler	18,255
Smackover light	1,875
Smackover heavy	14,500
Stephens	525
Troy	1,300
Urbana	950
Village	1,365
Total	70,235

*2,860 bbl. is distillate. †105 bbl. is distillate. Texas side of Rodessa, 26,325 bbl.

Through 20 Years With Skelly

"Through 20 Years With Skelly" is the title of a handsomely illustrated account of "the most important 20-year period in the history of the oil industry," prepared under the direction of C. C. Herndon, executive vice president and general counsel of the company. It recalls that the Skelly Oil Co. took its place in the industry in 1919 when, instead of an industry there was "an assortment of companies, individuals, refineries, brokers, jobbers, and curb pumps . . . . and a scattered array of crude-oil producers in various fields who scarcely thought of themselves as parts of an industry . . . . instead each for himself in the quickest possible exploitation of oil resources, regardless of the welfare of the industry."

The progress of the Skelly company through the pioneering years is well told, a story of initiative, enterprise, and solid achievement. The booklet is embellished with portraits of Skelly men, maps of producing areas in which the company has operated, and photographs of its manufacturing plants. Not least interesting is the company's list of initial production dates by pools. The development of each department is a lively chronicle of the expansion of the company, a picture of the evolution of an integrated oil company.

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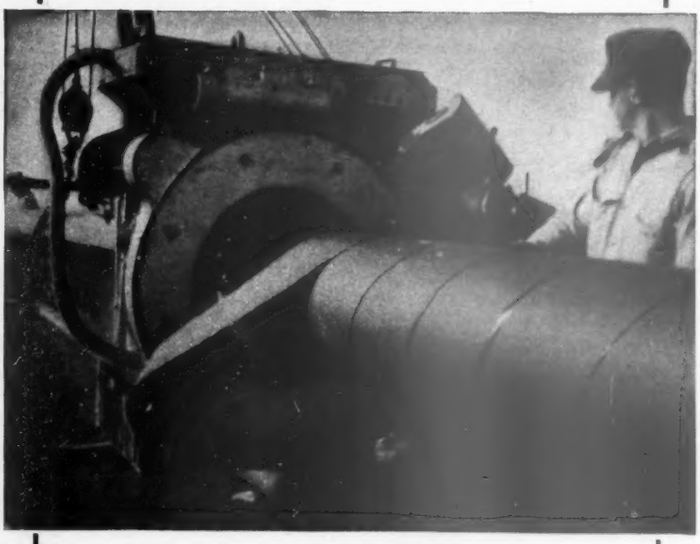

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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ont., Dec. 2.—In the Vermilion field, East Central Alberta, Franco-Vermilion's No. 1, Section 14-49-5w4, struck a gas flow, estimated 6,000,000 cu. ft. a day, at 1,610-ft. depth. Production was encountered at the contact between the Benton and the Lower Cretaceous. Location is about 14 miles south of Vermilion between Waintown-Battleview's No. 1, an oil producer, and two previous Battleview gas wells. The well was drilled by J. L. Wilson, cable tools being used. Waintown-Battleview's No. 1, in Section 20-50-5w4, got its crude production in the Lower Cretaceous at 1,850 ft., starting around 300 bbl. a day, but settling to a much smaller production on the pump, of crude testing 14.6 gravity. Gas from Franco-Vermilion's No. 1 may be piped to the town of Vermilion.

In the Ribstone-Blackfoot area, Highwood-Sarcee Oil Co.'s No. 1, LSD 1, Section 36-47-2w4, is below 1,900 ft. after drilling through the Lower Cretaceous contact. Gas was encountered at 1,400 and 1,740 ft.

On the Saskatchewan side, Shaw Petroleum's No. 3, LSD 5, Section 23-49-28w3, in the Lloydminster field, is below 1,100 ft. Franco-Colgate's No. 1 has derrick up and is installing machinery. Lloydminster's No. 1 has cellar dug and is moving equipment from Shaw's No. 2.

In the Alberta end of the Lloydminster field, Triangle Oil & Gas Co.'s No. 3, NW¼ Section 14-49-1w4, is resuming after cementing 10-in. casing at 294 ft. Storage tanks, with a pumping unit, are being completed at Shaw Petroleums' No. 2 crude producer, and a pumping unit is also being installed at Lloydminster Royalties' No. 1 in preparation for delivering crude to a new refinery.

Turner Valley Completions

In Section 25-19-3w5, West Central Turner Valley, Argus Royalties' No. 1, LSD 14, finished in the black lime at 7,384 ft., was given further acid treatments and is making government production test.

In Section 7-19-2w5, Anglo-Canadian Oil Co.'s No. 8, LSD 11, finished at 7,788 ft., has increased temporary allowable from 228 to 232 bbl.

In Section 6-19-2w5, East Crest Oil Co.'s No. 4, LSD 8, is experimenting with flare gas to increase production and is making around 200 bbl. compared with the earlier allowable of 100 bbl. a day.

In Section 16-18-2w5, Okalta Oil Co.'s No. 7, LSD 3, was finished at 7,425 ft., some 455 ft. in the Madison limestone. It started with a fair initial flow from the lower porous zone and is being acidized and tested. When lower-zone tests are completed, the upper zone will be gun-perforated and acidized through the casing.

In Section 29-18-2w5, Royal Canadian Oil Co.'s No. 3, LSD 12, finished in the upper lime at 8,656 ft. with 456-bbl. allowable, has developed a small intrusion of salt water. Located a considerable distance down the west flank of the structure, it was not carried into the lower porous horizon of the Madison on account of the dangers of water intrusion. A government test of the water is being made, but it is not expected to interfere with production. This is the first recorded intrusion of salt water in a Turner Valley producer, though Okalta's No. 6 and Scottish Petroleums' No. 1 were abandoned without developing commercial production after encountering salt water with oil in the lower lime horizon.

In Section 8-18-2w5, Northwest-Hudson's Bay Co.'s No. 2, LSD 9, is below 7,410 ft. after getting the Madison limestone at 7,150 ft.

In North Turner Valley, Royalite Oil Co.'s No. 4, LSD 2, Section 22-20-3w5, is below 8,707 ft., more than 416 ft. in the Madison, and will be an early completion.

West Central Field

In West Central Turner Valley, Arrow's No. 1, LSD 16, Section 13-19-3w5, is in the Benton formation below 3,979 ft.

In Section 8-19-2w5, South West Petroleum Co.'s No. 3, LSD 3, is in the Benton formation below 2,781 ft.

In Section 7-19-2w5, Pacific Petroleum's No. 5, LSD 6, is moving derrick from Pacific's No. 4 in Section 32-18-2w5. Location is between East Crest's No. 4 producer and Anglo-Canadian's No. 8.

In Section 6-19-2w5, East Crest Oil Co.'s No. 5, LSD 9, is in the Belly River formation below 3,366 ft. Kamaita Oils' No. 1, LSD 1, is below 1,180 ft.

In Section 5-19-2w5, Royalite Oil Co.'s No. 45, LSD 14, is in the Home sand below 6,640 ft. Vanpeg Royalties' No. 1, LSD 9, is in the Blairmore below 4,271 ft.

West Side Tests

In Section 31-18-2w5, Anglo-Canadian Oil Co.'s No. 7, LSD 9, Section 31-18-2w5, is in the lower Benton formation below 6,574 ft.

In Section 29-18-2w5, Command Oils' No. 2, LSD 11, is in the Kootenay formation below 7,315 ft. and expected to get the Madison around 7,450 ft.

In Section 20-18-2w5, York Oils' No. 3, LSD 3, is below 1,237 ft.

In Section 17-18-2w5, Extension Royalties' No. 3, LSD 13, is below 558 ft. Royalite Oil Co.'s No. 46, LSD 2, is below 7,206 ft. after getting the Home sand at 7,010 ft. and is expected to get the lime around 7,530 ft.

North Turner Valley

In Section 28-20-3w5, North Turner Valley, Home Oil Co.'s No. 4, LSD 9, is below 7,390 ft. after getting the Home sand at 7,037 ft., with the Madison lime expected between 8,000 and 8,200 ft. Home Oil Co.'s No. 3, LSD 1, Section 33-20-3w5, is in the Blairmore formation below 6,655 ft. after getting the Home sand at 6,250 ft., with the lime expected between 7,000 and 7,800 ft. Both tests are logging deeper than anticipated.

In Section 15-20-3w5, Anglo-Phillips' No. 1, LSD 14, is in the upper Benton formation below 2,839 ft.

In the Waite Valley area, National Petroleum Corp.'s No. 3, LSD 4, Section 25-

(Continued on Page 90)

California Field Report

By
L. P. STOCKMAN

Four Important Tests Hold Operators' Close Attention

LOS ANGELES, Calif., Dec. 4.—Four wells occupied the spotlight in California in the past week, two in Kern County in the San Joaquin Valley, and two in Los Angeles Basin. The wells in Kern County are No. 1 Bowerbank of Union Oil Co. in the Goose Lake district and No. 1 Kern County Land of Richfield Oil Corp. in the Fruitvale district, south of present production. No definite data is being released by Union on No. 1 Bowerbank, but field reports indicate that the company has logged enough oil sand in the Stevens sand to make a small well. The bit was still going ahead late in the week at about 11,195 ft. The Stevens formation at this point is reported to be too tight to produce, despite the fact that it contains oil sand. California Lands, Inc., found Stevens sand in its wildcat southeast of Union's present test, but it was found too tight to produce and the hole was abandoned. It is possible that Union Oil Co. will take this well down to the Vedder zone in the near future although no decision has been reached.

Richfield Oil Corp. completed a well outside of the productive area in the Fruitvale district of Kern County but it is unknown whether this is a new accumulation or merely an outpost in the old Fruitvale field. The well is No. 1 Kern County Land in Section 29-29-27, about 3,000 ft. south of production. It was started as a fault play and the volume of gas found indicates it is located on a new accumulation. On a formation test at 4,375-4,400 ft it showed a gas flow of 750,000 cu. ft., and was still flowing at the rate of 350,000 cu. ft. daily at the end of a 1-hour test. This showing indicates that Richfield Oil Corp. may have found a new productive area. The well was put on the beam after the hole had been finished with 42 ft. of 6⅝-in. liner including 30 ft. of perforated and 4,367 ft. of 2½-in. tubing but the flow of gas locked the pump. The crew then landed a gas anchor and brought in the well pumping 110 bbl. of 23.6-gravity oil cutting 3 per cent along with 60,000 cu. ft. of gas per day.

Attempts to develop deep production in the Long Beach field of Los Angeles Basin appeared to face further disappointment due to failure of Dormax Oil Co. to secure a natural flow in its No. 1 Signal bottomed in an oil sand at 10,394 ft. This well, as have other deep tests to date, has failed to show any kick and plans are now under way to put it on gas lift. The oil is there, but it appears to be rather dead, although of an excellent quality from a refining standpoint. In the west end of the Dominguez field R. E. Havenstrite cored the top of the Miocene zone in No. 1 Larronde in Section 32-3-13 at 7,070 ft. This well, which is west of production, will extend the Dominguez field about 1,500 ft. if it shows commercial production. It has been known for several months that the Miocene is coming up toward the west in this field, which condition has resulted in the leasing of many town lots as far west as Main Street, 1 mile west of production. Due to the many small holdings involved, an aggressive development program may follow if the Miocene extends far enough to the west.

Ventura Avenue

Shell Oil Co., Inc., and Tide Water Associated Oil Co. added 8,923 bbl. of new production in the Ventura Avenue field of Ventura County. Tide Water Associated Oil Co.'s No. 15 McGonigle was completed flowing 1,294 bbl. of 29.9-gravity oil cutting 6 per cent through a 28/64-in. bean behind a tubing pressure of 400 lb. and a casing pressure of 900 lb. from 10,050 ft. This new well was finished with a 7-in. water string cemented at 9,355 ft. and 740 ft. of 5-in. liner landed at 10,042 ft. and perforated at 9,366-10,042 ft. In addition to the crude oil produced the well is making 1,144,000 cu. ft. of gas per day.

No. 103 Taylor of Shell Oil Co., Inc., was brought in flowing 3,390 bbl. of 32.1-gravity oil and 1,993,000 cu. ft. of gas per day through open line from 8,239 ft. Perforations were made at 7,525-7,849 ft., 7,889-7,969 ft. and at 8,099-8,236 ft. Shell's No. 106 Taylor flowed 3,603 bbl. of 30.9-gravity oil and 3,995,000 cu. ft. of gas per day from the upper zone with bottom of the hole at 7,350 ft., with perforations at intervals from 6,360 ft. to 7,344 ft. Tubing pressure reads 275 lb. and the casing pressure is 1,500 lb. No. 64 Taylor of Shell, a former upper-zone producer at 4,578 ft., was returned to production flowing 636 bbl. of clean 30.6-gravity oil and 3,540,000 cu. ft. of gas per day after the hole had been deepened to 5,404 ft. No. 3 Lloyd of the Lloyd Corp., headed by Ralph Lloyd, tested wet this week and has been recemented. It is 10,361 ft. deep, but has been plugged back to 9,980 ft. No. 4 Lloyd at 9,960 ft. with a 7-in. water string cemented at 9,548 ft., has secured a satisfactory water shutoff and is being prepared for production.

Gas Wells

In the Delano gas field of Kern County Trico Oil & Gas Co. completed No. 1 Tulare Farms in Section 27-24-23 flowing 30,000,000 cu. ft. of gas daily through a 1-in. bean from 2,470 ft. The well is in the northwestern end of the field several locations removed from other production. The Delano gas field was connected to facilities of the Southern California Gas Co. and Pacific Gas & Electric Co. earlier this year by a joint line laid by these purchasing companies.

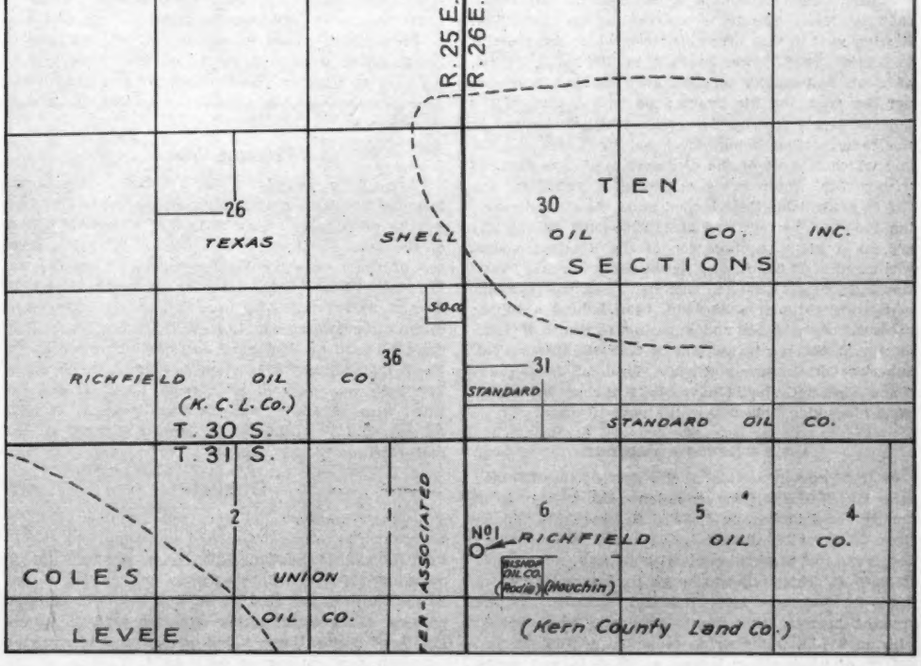
Up in Sacramento County Texas Co. finished No. 1 Welch in Section 5-3-3 in the Rio Vista gas field flowing 10,057,000 cu. ft. of gas daily through a 32/64-in. bean from 4,199 ft. It shows a shut-in pressure of 1,800 lb. The flow pressure back of the 32/64-in. bean was 1,700 lb. The well is easily capable of flowing 25,000,000 cu. ft. of gas per day on steady production.

Montebello

In the western extension of the Montebello field the deep test of Larson Drilling Co., which failed to find commercial production in La Merced zone, made additional footage. This well, No. 3 Van Deusen, found La Merced zone wet due to edgewater and the bit late in the week was making hole at 7,940 ft. The next zone is expected at about 8,000 ft. below the apex of the structure. If it proves productive it will change the present objective of all wells now drilling and lead to extensive deepening operations. A recent check indicated that operators for the most part would deepen present holes instead of starting from the grass roots when development of the zone below La Merced gets under way. They feel that one string of casing will take care of the situation in both zones. This would be accomplished by running a blank section opposite La Merced zone and later perforated for production as developments warranted. Several wells were drilled with this idea in mind and were finished with a short piece, usually 60 to 80 ft., of drillable liner at the top of the usual steel liner to facilitate recovery when the hole was subsequently started down to deeper productive zones.

Montebello Completions

In the west end of the Montebello field Union Oil Co.'s No. 35 La Merced was brought in flowing 503 bbl. of relatively clean 35.2-gravity oil and 520,000 cu. ft. of gas per day from La Merced zone, with bottom of the hole at 7,630 ft. It flowed through a 32/64-in. bean behind a tubing pressure of 500 lb. and a casing pressure of 700 lb. and shows a favorable gas-oil ratio, a highly desirable factor in view of the court injunction regulating production and distribution of gas. The 5½-in. liner was perforated at 7,514-7,612 ft. The gas zone at the top of La Merced zone is cased off.



Richfield Oil Corp. is starting an important wildcat in Section 6-31-26 about midway between the west end of the Ten Section field and the east end of the Cole's Levee field in Kern County, California

York Oil Co. completed No. 6 Mulholland in the west end of the field, flowing 288 bbl. of 38.1-gravity oil and 2,800,000 cu. ft. of gas per day from La Merced zone with bottom of the hole at 7,630 ft. It flowed through a 48/64-in. bean, tubing pressure 300 lb. and casing pressure 600 lb. The liner was perforated at 7,528-7,595 ft. and was cemented through perforations at 7,528 ft. Montebello is by far the most active field in the state at present and the number of new locations made recently and the fact that a productive zone below La Merced may soon be opened up for drilling tends to indicate that this field will continue to head the active drilling list for several months.

Wilmington

Six wells were completed in the Wilmington field of Los Angeles Basin with an aggregate initial production of 2,912 bbl. Union Pacific Railroad Co.'s No. 119 registered an initial of 1,480 bbl. of 27.4-gravity oil and showed a tubing pressure of 380 lb. and a casing pressure of 450 lb. The 5½-in. liner, landed at 3,894 ft., was perforated at 3,627-3,713 ft., 3,723-3,806 ft., and 3,826-3,894 ft. This well is producing from the upper and lower Terminal zone. Union Pacific's No. 19-E started off flowing 585 bbl. of clean 29.5-gravity oil per day from 4,005 ft. behind a tubing pressure of 470 lb. and a casing pressure of 550 lb. Perforations were at 3,160-3,202 ft., 3,215-61 ft., 3,281-3,381 ft., 3,697-3,773 ft., 3,785-3,865 ft., and 3,885-3,997 ft.

Richfield Oil Corp. completed a small flowing well from the Ranger zone when No. 32 Pacific Dock was brought in doing 160 bbl. of 15.7-gravity oil cutting 2 per cent from 3,336 ft. Zephyr Oil Co.'s No. 2 Harbor started off flowing 203 bbl. of 21.3-gravity oil cutting 3 per cent from 3,615 ft.

No. 8 Baxter of Hollywood Oil Co. showed an initial production of 302 bbl. of 15.9-gravity oil cutting 4 per cent from the Ranger zone with bottom of the hole at 3,350 ft.

Late in the week Jackson Exploration Co. completed No. 1 Workman flowing 182 bbl. of clean 15.6-gravity oil per day from the Ranger zone with bottom of the hole at 3,520 ft. The 8⅝-in. water string was cemented in this well at 3,159 ft. Drilling operations in the Wilmington field have reached a settled stage and this freedom from competitive offsetting has permitted operators to stabilize work to a large extent. Consequently the number of new rigs and locations staked has reached a low point. No indication is evident of the position to be taken by operators with respect to development of the Ford zone and while this possibility is still almost a month away it would seem that operators will approve any move to keep the agreement preventing exploitation of this zone in effect for another 6 months if possible.

Rio Bravo

Superior Oil Co., leading operator in the Rio Bravo field of Kern County, completed another excellent flowing well in that area this week when No. 1 Smith in Section 34-28-25 was brought in flowing 3,032 bbl. of clean 38.1-gravity oil and 2,600,000 cu. ft. of gas per day from the Rio Bravo zone with bottom of the hole at 11,464 ft. This new well, which is located in the same section being developed by Union Oil Co. and which is west of the discovery well, was finished with a 7-in. water string cemented at 11,230 ft. and 257 ft. of drillable liner landed at 11,464 ft. and carrying 125-mesh perforations at 11,228-11,464 ft. and 10,606 ft. of 2½-in. tubing. Top of the Rio Bravo zone was cored at 11,230 ft. and top of the lower Rio Bravo was logged at 11,290 ft. This new well was brought in flowing through a 36/64-in. bean behind a tubing pressure of 1,425 lb. and a casing pressure of 1,925 lb. Up in the northwest end of the Rio Bravo field, Superior Oil Co. has reached a depth of 7,050 ft. in No. 2 Fink and should have No. 2 Burner in Section 27-28-25 making hole within the next 10 days.

Cole's Levee—Tupman

In the Tupman section of the Cole's Levee-Tupman area, Richfield Oil Corp. completed No. 12-33-A Kern County Land in Section 33-30-25 flowing 1,570 bbl. of clean 33.9-gravity oil and 1,260,000 cu. ft. of gas per day from the Stevens sand with bottom of the hole at 9,040 ft. This well was originally carried down to 9,331 ft., but was later redrilled to 9,040 ft. and brought in from that depth. The hole was finished with an 8⅝-in. water string cemented at 8,443 ft. and 805 ft. of 6⅝-in. liner landed at 9,036 ft. and perforated at 8,686-8,917 ft. and 8,976-9,036 ft. and cemented through perforations at 8,682 ft. Production was brought in flowing through open line but after the flow had steadied down it was flowed through a small bean. This area, which appears to be one large field but which may later be found to be separated by a fault not yet known to exist, has become quite active during the past several weeks. The area is so large that it can sustain considerable drilling and yet seem fairly quiet. The only disconcerting feature in connection with development work is the fact that as each month passes it becomes evident that considerable offset work will be required. Drilling will be done on the basis of 1 well to each 20 acres and if this proves one large single field it may contain 5,000 or more acres.

Mount Poso

Ring Oil Co. completed No. 5 Bohen in the Mount Poso field in Section 32-26-28 pumping 285 bbl. of 16.1-gravity oil per day from the Vedder zone with bottom of the hole at 1,645 ft. This new well, which cored top of the productive Vedder zone at 1,636 ft., was finished with an 8⅝-in. water string cemented at 1,635 ft. and 30 ft. of 6⅝-in. liner landed on bottom and carrying perforations at 1,635-45 ft. In Section 20-26-28 Crestmont Oil Co. has concluded drilling operations at No. 2 Buchner at 1,557 ft. and is rigging up to pump. The hole was plugged back from 1,562 ft. and finished with an 8⅝-in. water string cemented at 1,536 ft. and 60 ft. of 6⅝-in. liner landed at 1,557 ft. and perforated at 1,536-57 ft.

Fruitvale

Inside the proved limits of the Fruitvale field of Kern County, Western Gulf Oil Co. completed No. 12 Red Ribbon, in Section 27-29-27. It was brought in pumping 170 bbl. of 18.3-gravity oil, cutting 3 per cent, from a depth of 4,009 ft. The hole was finished with an 8⅝-in. water string cemented at 3,935 ft. and 129 ft. of 6⅝-in. liner landed on bottom and carrying 180-mesh perforations at 3,921-4,004 ft. Top of the productive Kernco oil sand was cored at 3,941 ft. Meridian Petroleum Co. has apparently given up all idea of developing deep-zone production in this field and has plugged back No. 2 fee, the deep test, from 8,531 ft. to 3,742 ft. From the latter depth the well is pumping 76 bbl. of 21.1-gravity oil cutting 10 per cent daily.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	November 26		November 19			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	61,173	8,739	.....	.....	918,539	852,826
Fuel oil	75,040	10,720	.....	.....	2,031,881	58,964
Diesel and gas oil	.....	.....	.....	.....	163,501	.....
Gasoline	.....	.....	.....	.....	3,048,371	2,705,801
Kerosene	.....	.....	.....	.....	225,197	333,626
Foreign exports—						
Crude oil	263,882	37,697	96,792	13,827	13,406,614	19,760,012
Fuel oil	142,331	20,333	129,313	18,473	8,076,268	8,092,783
Diesel and gas oil	305,701	43,672	40,605	5,801	7,161,638	5,344,014
Gasoline	166,090	23,727	.....	.....	6,840,305	7,245,203
Kerosene	.....	.....	.....	.....	1,798,580	950,751
Asphalt	.....	.....	.....	.....	.....	7,563
Lubricants	.....	.....	.....	.....	165,166	175,560
Coastwise-domestic—						
Crude oil	393,382	56,197	141,312	20,187	11,465,540	10,429,733
Fuel oil	147,166	21,024	148,606	21,229	9,564,497	11,295,646
Diesel and gas oil	54,591	7,799	22,119	3,160	2,084,382	1,408,079
Gasoline	167,851	23,979	218,436	31,205	15,005,518	13,404,146
Kerosene	21,240	3,034	14,988	2,141	555,427	240,556

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	124,055	.....
Diesel and gas oil	.....	.....	160,348	22,907	314,092	251,560
Gasoline	.....	.....	.....	.....	43,235	25,409
Kerosene	.....	.....	.....	.....	100,507	16,124
Asphalt	.....	.....	75,478	10,783	501,323	490,039
Lubricants	.....	.....	.....	.....	24,870	19,945
Foreign exports—						
Crude oil	178,523	25,503	138,522	19,789	5,325,012	4,778,370
Fuel oil	84,063	12,009	19,780	2,826	2,785,905	2,323,258
Diesel and gas oil	135,702	19,386	43,918	6,274	2,533,846	3,052,566
Gasoline	32,501	4,643	75,351	10,764	2,943,177	5,167,496
Kerosene	.....	.....	.....	.....	554,589	696,099
Asphalt	.....	.....	8,172	1,167	22,323	56,258
Lubricants	.....	.....	.....	.....	625,294	534,142
Other finished oil	.....	.....	116	17	815	.....
Coastwise-domestic—						
Fuel oil	60,753	8,679	71,485	10,212	5,773,892	5,854,882
Diesel and gas oil	18,149	2,593	29,812	4,259	1,189,309	1,436,586
Gasoline	130,355	18,622	133,576	19,082	7,226,986	7,102,296
Kerosene	29,288	4,184	12,211	1,744	878,823	597,747

TOTAL TANKER SHIPMENTS FROM CALIFORNIA TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Crude oil	61,173	8,739	.....	.....	918,539	852,826
Fuel oil	75,040	10,720	.....	.....	2,155,936	58,964
Diesel and gas oil	.....	.....	160,348	22,907	477,593	251,560
Gasoline	.....	.....	.....	.....	3,091,606	2,731,210
Kerosene	.....	.....	.....	.....	325,704	349,750
Asphalt	.....	.....	75,478	10,783	501,323	490,039
Lubricants	.....	.....	.....	.....	24,870	19,945
Foreign exports—						
Crude oil	442,405	63,201	235,314	33,616	18,731,626	24,538,382
Fuel oil	226,394	32,342	149,093	21,299	10,862,173	10,416,041
Diesel and gas oil	441,403	63,058	84,523	12,075	9,695,484	8,396,580
Gasoline	198,591	28,370	75,351	10,764	9,783,482	12,412,699
Kerosene	.....	.....	.....	.....	2,353,169	1,646,850
Asphalt	.....	.....	8,172	1,167	22,323	63,821
Lubricants	.....	.....	.....	.....	790,460	709,702
Other finished oil	.....	.....	116	17	815	.....
Coastwise-domestic—						
Crude oil	393,382	56,197	141,312	20,187	11,465,540	10,429,733
Fuel oil	207,919	29,703	220,091	31,442	15,338,389	17,150,528
Diesel and gas oil	72,740	10,391	51,931	7,419	3,273,691	2,844,665
Gasoline	298,206	42,601	352,012	50,287	22,232,504	20,506,442
Kerosene	50,528	7,218	27,199	3,886	1,434,250	838,303

Western Kentucky

(Continued from Page 65)

miles northwest of Owensboro: M. P. Evans and others' No. 1 Sam Ewing, dry hole, total depth 1,887 ft. Floral district: Wickwire & Masters' No. 1 R. V. Howard, dry hole, total depth 1,047 ft.

Hancock County, Sanders School district: Glenn Chancellor's No. 1 H. Bivens, dry hole, total depth 1,296 ft. W. J. Flesher's No. 1 Jane Sanders, 222,000 cu. ft. of gas from Jackson sand, total depth 486 ft. No. 2, rigging up. Cloverport district: Roy Beard's No. 1 Duke heirs, rigging up. Lyonia district: White & Vickers' No. 1 C. W. Newton, dry hole, total depth 367 ft.

Henderson County, Spottsville district: Magnolia Petroleum Co.'s No. 1 Boyd heirs, making ½ bbl. of oil and ½ bbl. of water per hour; will put on pump. Niagara district: Niagara Oil & Gas Co.'s No. 3 T. T. Tillotson, drilling at 260 ft.

McLean County, South Livermore district: M. L. Swartzberg's No. 1 R. L. Davis, moving in.

Ohio County, Taffy district: Dehart & Lykens' No. 6 M. S. Bartlett, 5-bbl. well in Jett sand, total depth 442 ft. Horton district: Frazier & Lilly's No. 1 C. B. Davis, dry hole, total depth 1,465 ft. Sunnydale district: J. B. Moore and others' No. 1 A. T. Fleener, 10 bbl. per day from Pennsylvanian sand, total depth 170 ft. Adaburg district: Leeper Oil Co.'s No. 10 E. Ford, rigging up. Ohio Oil Co.'s No. 16 W. B. Kelly, 12-bbl. well in Jett sand, total depth 620 ft. O. D. Vickers and others' No. 4 Sapp heirs, dry hole, total depth 600 ft. Deanfield district: M. L. Swartzberg and others No. 1 Frank Hanna, 10-bbl. well on Barlow sand, total depth 682 ft.

Todd County, Elkton district: J. A. Eubank and others' No. 1 B. N. Scott, 500,000 cu. ft. of gas at 1,345-48 ft., total depth 1,481 ft.

Oklahoma Operations

By DAL DALRYMPLE

Tap Hunton-Lime Production In Old Milroy Shallow Pool

A new producing horizon in the Milroy area of Stephens County, Oklahoma, was uncovered at Carter Oil Co.'s No. 1 Harley, C NE NE Section 24-2s-4w, an old well that was plugged back and perforated casing in Hunton lime at 4,845-75 ft., and was acidized. It flowed 825 bbl. of oil gross through tubing in 7 hours. In 18¾ hours it flowed 2,067 bbl. of 35.5-gravity sweet oil. This well discovered deep pay in Simpson formation at 8,157 ft., total depth, in 1937, and produced from the deep zone until a few weeks ago. A deep offset, across the line in Carter County, failed to find production. Other wells in the field produce from shallow sands. If Hunton lime is found productive throughout the field, an extensive drilling program will follow.

Continental Oil Co. was testing at its No. 1 Goodboy, C SE NW Section 18-25-2e, on the south flank of the Ponca City pool, Kay County. It was estimated good for 150 bbl. of oil daily from sand at 3,901-41 ft.

The west extension of the St. Louis field, Pottawatomie County, was extended one 40-acre location to the southeast at Marko, Inc.'s No. 1 Vineyard, C SW NW Section 14-7-3e. It had Hunton lime at 4,326-70 ft., total depth, set pipe at 4,275 ft., was acidized and flowed 1,000 bbl. of oil in about 6 hours. It checked slightly higher structurally than other producers in the area. South offset was started.

Wildcat Operations

Neustadt's No. 1 Howeth, NE SW NE Section 14-6-4, had Wilcox sand at 5,308-87 ft., total depth, water intruded from dolomite, and it was dry and abandoned. This outpost was south of the St. Louis field, Pottawatomie County.

J. F. Smith's No. 1 Lowry, NW NW SW Section 10-6-5, wildcat southeast of the Iglehart extension area of the St. Louis field and in Seminole County, had Viola lime at 4,443 ft., total depth 4,589 ft., water intruded, it was plugged back to 4,343 ft. and acidized, but was dry and abandoned.

LeFlore Gas & Oil Co.'s No. 2 Hickman, C S½ S½ Section 8-8-25, wildcat in LeFlore County, had sand at 2,240-50 ft., total depth, and was dry and abandoned. Same company's No. 1 Hickman, NE NE SE Section 8-8-25, deep wildcat test in the same area, was shut down at 5,930 ft.

Nels Burton and others' No. 1 Norman, NW NW NE Section 17-9-2w, old wildcat in the Norman area, Cleveland County, perforated casing in Wilcox sand at 7,645-95 ft., and at 7,484-7,660 ft. Six-inch casing was set at 7,661 ft. It was acidized with 2,000 gal., 5,000 gal. and 3,000 gal. It pumped 321 bbl. of oil in 24 hours, cutting 10 per cent; then pumped 125 bbl. of oil and 19 bbl. of water in 24 hours.

Hughes' No. 1 Fultz, SE SE SE Section 10-6-18w, Kiowa County wildcat, lost tools at 1,242 ft. and was temporarily abandoned at 1,186 ft., total depth..

D. F. Millard's No. 1 Osage, SE SE NE Section 16-28-11, wildcat in Osage County, found Prue sand at 1,279-94 ft., total depth, and was dry and abandoned.

New wildcat operations: Jones' No. 1 Neil, SW SW SW Section 8-1s-20w, southwest of the Tipton pool, Jackson County, set 15-in. casing at 20 ft. and was waiting on cement; Harper's No. 1 Thompson, SE SE SE Section 5-1s-21w, south of Olustee, Jackson County, was rigging up rotary tools; Harper-Turner's No. 1 Winger, NW NW NW Section 6-16-2e, in Lincoln County, south of the Coyle pool and east of the South Langston area, cellar and pits; Norbla Oil Co.'s No. 1 Osage, NW NE NW Section 9-24-6, southeast of Fairfax, Osage County, old well, preparing to shoot after ripping casing at 2,720-60 ft.; B. & M. Oil Co.'s No. 1 Burnett, SW NE NE Section 30-7-2w, northwest of Purcell, McClain County, drilling below 200 ft.; Fain Drilling Co.'s No. 1 Schuakenburg, NE SE SW Section 21-21-4w, southwest of Garber, Garfield County, cellar and pits; Wood Oil Co.'s No. 1 Crow, SE SE SE Section 31-8-6, Seminole County, location; Thompson's No. 1 Meadors, NE NE NE Section 23-9-9, Hughes County, rigging up rotary; Summitt Drilling Co.'s No. 1 Campbell, SE NE SE Section 24-10-7, Seminole County, north of North Bethel, building rig.

Pottawatomie County

Deepening or plugging back and recompleting old wells featured operations in the St. Louis district, Pottawatomie County. These included:

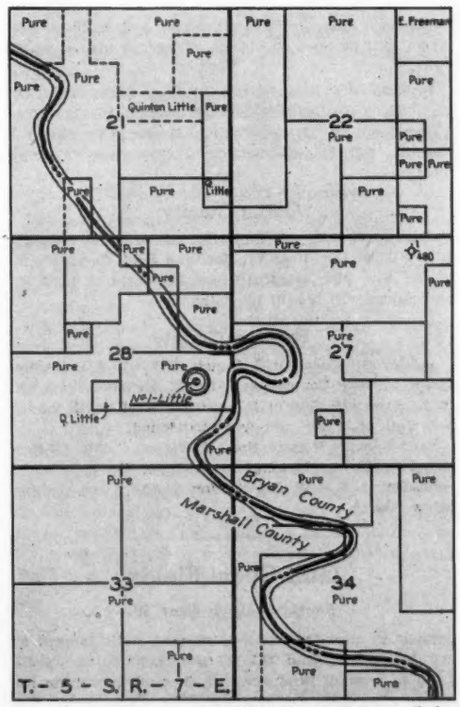
Sinclair Prairie Oil Co.'s No. 5 Deatheridge, NW NE NW Section 28-7-4, deepened from 4,146 ft. to Wilcox sand at 4,295-4,309 ft., total depth. It flowed 2,892 bbl. of oil in the first 24 hours and 2,813 bbl. the next 24 hours.

Same company's No. 2 Deatheridge, NE NE NW Section 28-7-4, deepened from 4,137 ft. to Wilcox sand at 4,278-95 ft., total depth, swabbed 1,700 bbl. of oil in 24 hours.

Phillips Petroleum Co.'s No. 3 Bettis, SW SE SW Section 21-7-4, swabbed 1,150 bbl. of 43-gravity oil in 24 hours after deepening from 4,176 ft. to Wilcox sand at 4,295 ft., total depth 4,320 ft.

Krumme's No. 1 Coley, NW SE SE Section 24-7-4, deepened from 3,857 ft. to Wilcox sand at 4,260-63 ft., total depth, plugged back to 4,210 ft. and pumped 2 bbl. of oil and 12 bbl. of water in 24 hours.

Magnolia Petroleum Co.'s No. 1 Billington, NW NW SW Section 36-7-4, was acidized and pumped 65 bbl. of oil and 100 bbl. of water in 24 hours after deepening from 4,240 ft. to 4,266 ft. in dolomite.



Midcontinent Map Co., Tulsa

Pure Oil Co. was moving in material at No. 1 Little (Perrin), C W½ NE SE Section 28-5s-7e, in eastern Marshall County, near the Bryan County line. Location is on a block of about 20,000 acres. Production in Wilcox sand will be sought

Shaffer's No. 1 Groves, NE NE NE Section 5-6-5, was plugged back from 4,338 ft. to 3,390 ft., shot at 2,795-2,805 ft., and pumped 65 bbl. of oil and 40 bbl. of water daily.

J. F. Smith's No. 1 Brandenberg C, SW SW SE Section 34-8-4, was deepened from 4,167 ft. to Wilcox sand at 4,277-78 ft., plugged back, lost hole and was abandoned.

In the Maud district Texas Co.'s No. 4 Calvin, NE NW SE Section 7-8-5, was acidized and pumped 140 bbl. of oil in 24 hours after deepening from 4,342 ft. to 4,362 ft. in dolomite.

Estimated Daily Production

Estimated daily production for Oklahoma for the week ended December 2, and for the preceding week was as follows:

	Barrels	
	Dec. 2	Nov. 25
Allen	5,925	5,875
Billings	6,475	6,325
Burbank	7,375	7,275
South Burbank	9,350	9,350
Balance Osage	17,850	17,700
Blackwell district	3,625	3,525
Bristow-Slick	6,450	6,400
Chandler	1,575	1,475
Crescent	2,750	2,650
Cromwell	4,025	3,025
Cushing-Shamrock	9,500	9,300
Duncan	3,775	3,750
Edmond	4,400	4,375
Fish	4,175	4,075
Fitts	21,200	19,900
Jesse	2,325	2,125
Graham-Fox	2,925	2,850
Gray	825	775
Healdton	9,575	9,525
Hewitt	4,075	3,950
Keokuk	3,600	3,475
Konawa	1,325	1,225
Lucien	8,475	8,350
Moore	2,650	2,675
Oklahoma City	89,950	105,900
Olympic	2,750	2,675
Ramsey	4,975	4,950
Sasakwa	1,750	1,650
Sholem-Alechem	2,775	2,675
Seminole district:		
Bowlegs	7,150	7,125
Carr City	2,450	2,375
Dora	2,975	2,950
Earlsboro	4,225	4,175
South Earlsboro	575	525
East Earlsboro	2,700	2,650
Little River	6,275	6,150
East Little River	800	750
Maud	650	625
Mission	1,350	1,275
Seminole	6,900	6,825
East Seminole	1,275	1,175
Searight	2,275	2,175
Total Seminole	39,600	38,775
St. Louis-Pearson	29,800	28,300
Tatums	2,025	1,950
Tonkawa-Garber-Thomas	4,025	3,950
Wewoka	1,700	1,625
Yale-Jennings	3,525	3,375
Other pools	96,400	91,450
Total Oklahoma	423,500	427,225

Atlantic Refining Co.'s No. 3 Spaugy, SE SW NW Section 6-6-4, was a completion in the Avoca pool, south of St. Louis. It topped Viola lime at 4,224 ft., had second Wilcox sand at 4,461 ft., total depth 4,485 ft., and perforated casing at 4,225-40 ft. in Viola lime to complete. After acid treatment, it flowed 367 bbl. of oil in 14 hours, pinched.

Yorkan Production Co.'s No. 1 Williams, NW SW NW Section 4-10-4, Shawnee pool, had Earlsboro sand at 4,425 ft., total depth 4,570 ft., water intruded and it was abandoned.

Indian Territory Illuminating Oil Co.'s No. 4 Weems, SE SE SW Section 21-7-5, St. Louis district, had sand at 2,763 ft., total depth 2,774 ft., plugged back to 2,772 ft., and pumped 25 bbl. of oil and 12 bbl. of water daily.

New work in Pottawatomie County: Culver & Shepherd and others' No. 1 Waite A, NE SE NW Sec-

tion 9-5-5, cellar and pits; same operators' No. 2 Waite, SW NW NE Section 9-5-5, set 13-in. casing at 100 ft., waiting on cement; H. Phillips' No. 4 Bradshaw, SW SW SE Section 21-7-4, twin well, building rig; J. F. Smith's No. 2 Hines, NE SE NE Section 21-7-4, an old well being deepened, drilling below 4,297 ft.; Tilico Oil Co.'s No. 2 Hulsey, NE NE SW Section 26-7-4, rig; Central Co.'s No. 1 Mijah, NE NE SW Section 28-7-4, old well bottomed at 4,250 ft., to deepen; same company's No. 2 Mijah, NW NE SW Section 28-7-4, location; Sinclair Prairie Oil Co.'s No. 1 Deatheridge, NW NW NW Section 28-7-4, old well being deepened, drilling below 4,217 ft.; same company's No. 8 Deatheridge, NE NW NW Section 28-7-4, twin, location; Tilico Oil Co.'s No. 4 Brister, SW NW NE Section 28-7-4, twin, cellar;; Sinclair Prairie Oil Co.'s No. 6 Nadash, NE NW SW Section 29-7-5, old well, rigging up standard tools to deepen; Delaney's No. 3 Bruno, NE NE SE Section 31-7-5, old well, rigging up standard tools to deepen; J. F. Smith's No. 1-A Brandenberg C, SW SW SE Section 34-8-4, twin, rig; R. Olsen's No. 5 Gillis, NW SW NW Section 5-10-4, set 12-in. casing at 100 ft., building rig; G. L. Pace's No. 1 Taer, SE NW SW Section 31-10-5, drilling below 1,800 ft.; Dunnett's No. 1 McDaniels, NW SW SE Section 31-11-4, set 12-in. casing at 100 ft., waiting on cemeht.

Seminole County

Summers' No. 1 Caesar, SW cor. Section 21-6-6, Seminole County, topped Viola lime at 3,506 ft., Dense 3,594 ft., total depth 3,600 ft., pumped 135 bbl. of oil and 75 bbl. of water the first 24 hours, and 90 bbl. of oil and 90 bbl. of water the next 24 hours.

W. A. Villines' No. 1 Millsap, SE SW SW Section 23-7-5, an old well in the Hazel district, bottomed at 2,939 ft., perforated casing, pumped 20 bbl. of oil daily and was recompleted.

Wood Oil Co.'s No. 1 Factor, SW SW SW Section 15-7-5, found Calvin sand at 2,767 ft., and was dry and abandoned at total depth of 2,783 ft. Same company's No. 3 Tobin, SE SW NW Section 22-7-5, was an abandoned location.

Skelly Oil Co.'s No. 1 Carl, SW SE NE Section 14-7-6, an old well in the Little River area, was plugged back from 4,251 ft. to 3,255 ft., ripped casing and shot, but was dry and abandoned.

Cities Service Oil Co.'s No. 3 Dameron, SW SE NW Section 20-6-6, an old well in the Konawa area, was deepened from 2,869 ft. to sand at 2,921-24 ft., total depth 2,946 ft., perforated casing at 2,490-2,582 ft. and pumped 4 bbl. of oil and 4 bbl. of water in 3 hours.

Magnolia Petroleum Co.'s No. 2 Carter, NE NE NW Section 25-8-7, Rosanna pool, topped Cromwell sand at 3,309 ft., total depth 3,324 ft., and pumped 100 bbl. of oil in 24 hours.

Atlantic Refining Co.'s No. 1 Pipkin, NE SW NW Section 2-10-5, an old well, was plugged back from 4,670 ft. to 4,460 ft., ripped casing, was shot and acidized, but was dry and abandoned.

Pontotoc County

Senora Oil Co.'s No. 1 Tucker, SW NE NE Section 35-5-4, Bebee area, Pontotoc County, topped Viola lime at 2,345 ft., total depth 2,453 ft., was acidized and pumped 74 bbl. of oil in 24 hours.

H. & M. Drilling Co.'s No. 6 Harrell, CWL NE SE Section 29-5-8, Allen district, was shot in sand at 832-50 ft., total depth, and pumped 25 bbl. of oil in 24 hours.

In Hughes County, Manahan Drilling Co.'s No. 1 Stand, SE NE NW Section 23-6-8, was drilling below 2,160 ft.

Oklahoma County

Indian Territory Illuminating Oil Co.'s No. 4 View Point, SW SW SE Section 10-11-3w, an old well in the Oklahoma City field, Oklahoma County, was deepened from 6,482 ft. to Wilcox sand at 6,375 ft., total depth 6,541 ft., and was shot at 6,482-6,541 ft. It pumped 171 bbl. of oil in 24 hours.

Garfield County

Sinclair Prairie Oil Co.'s No. 44 West Kisner, C NW NW Section 19-22-3w, Garber field, Garfield County, had sand at 1,050-70 ft., set 10-in. casing at 1,045 ft. and was bottomed at 1,629 ft. It was plugged back to 1,070 ft., was shot and pumped 10 bbl. of oil daily.

Same company's No. 45 West Kisner, NW SW NW Section 19-22-3w, was a machine. Champlin Refining Co.'s No. 1 Mackey, NW NW SW Section 4-24-8w, an old well in the Hillsdale area, was deepened from 6,703 ft. to 6,709 ft. and had 2,000 ft. of fluid in the hole.

Creek County

Jarrett's No. 1 Isles, NW SE NE Section 1-19-9, Creek County, found Bartlesville sand at 2,063-78 ft., total depth, the hole filled with water and it was abandoned.

New activity in Creek County: Service Pipe Line Co.'s No. 6 McIntosh, NW NE NW Section 26-18-7, machine; Bryan Petroleum Co.'s No. 1 Posey, NW SE SW Section 22-18-9, cellar; same company's No. 2 Willibey, NW NE SW Section 22-18-9, drilling below 525 ft.

In Okfuskee County, Wells' No. 1 Powell, C NW SW Section 3-10-12, was a location.

In LeFlore County, LeFlore Gas & Oil Co.'s No. 3 Moseley, C N½ SW Section 9-8-25, was a machine.

Caddo County

Carey's No. 1 Moore, SE NE SW Section 3-5-9w, Cement field, Caddo County, had Noble-Olson sand at 3,299 ft., Rowe sand 3,366 ft., total depth 3,416 ft., perforated casing at 3,361-3,416 ft., and made swabbing potential of 507 bbl. of oil.

Riddle's No. 1 Mayes, SE NW SE Section 3-5-9w, was dry and abandoned at 3,505 ft., total depth.

Martin's No. 1 Wilson, SW NW SE Section 3-5-9w, set 10-in. pipe at 311 ft. and was waiting on cement.

Jackson County

Gulf Oil Corp.'s No. 3 McDaniel, NE SE NE Section 3-1n-20w, Altus field, Jackson County, set 7-in. casing at 1,427 ft., was bottomed at 1,592 ft., and pumped 26 bbl. of oil in 24 hours.

Same company's No. 2 Barrett, NW NE SW Section 10-1n-20w, pumped 25 bbl. of oil in 24 hours. Total depth was 1,661 ft., with 7-in. pipe set at 1,515 ft. The company's No. 3 Barrett, NE NE SW Section 10-1n-20w, set 10-in. pipe at 99 ft. and was waiting on cement.

Stephens-Cotton-Jefferson

George Pace's No. 2-A Montgomery, NE SW SE Section 11-2s-8w, Empire field, Stephens County, was dry and abandoned at 2,191 ft., total depth. Helmerich & Payne, Inc.'s No. 2 Hefner, NE NE SW Section 12-1n-5w, was a rig.

Shasta Oil Co.'s No. 2-A Littlefield, NE SE NW Section 31-1s-9w, Walters area, Cotton County, was dry and abandoned at 2,302 ft., total depth.

Losh's No. 2 Trout, SE SE NW Section 17-7s-5w, Oscar-Seay area, Jefferson County, had sand at 810-36 ft., and pumped 10 bbl. of oil and 10 bbl. of water daily.

In Tillman County Indian Territory Illuminating Oil Co.'s No. 6 Graham, SE NE NE Section 1-3s-19w, was a location. In Grady County McCasland's No. 1-A Costello, SE SE SE Section 21-3-5w, was clearing location.

Carter County

Sinclair Prairie Oil Co.'s No. 34 Ardworth, C E½ W½ NW Section 10-4s-3w, Healdton field, Carter County, set 8-in. pipe at 840 ft., was bottomed at 1,085 ft., and pumped 20 bbl. of oil daily.

Pawnee County

Platter Oil Co.'s No. 3 Bunch, NW SW SW Section 4-20-9, Pawnee County, an old well deepened from 680 ft. to Arbuckle lime at 2,750-60 ft., total depth, had a hole full of water and was abandoned.

Sand Springs Home's No. 1-A Haven, C N½ SE Section 27-20-7, was rigging up machine; Brown's No. 1 Schessler, NW NW SE Section 21-22-7, was drilling below 830 ft.

Gulf Coast Fields

(Continued from Page 69)

defined in two directions as outpost wells loomed as dry holes. Stanolind Oil & Gas Co.'s No. 1 Tyrell, 2,000 ft. west of production, is shut down waiting for orders after it flowed salt water on a production test through perforated casing at 8,013-16 ft. On the east side of the field Pan American Production Co.'s No. 1 Palmer Hutcheson drilled to a total depth of 8,142 ft., and the well is temporarily shut down after an electrical survey failed to indicate any productive sands.

Location for three more interesting wildcats were reported for the district. In southeastern San Jacinto County, Harrison & Abercrombie staked location for No. 1 Lockin, a projected 8,500-ft. Tertiary Wilcox test in the Shepherd area in the William Hays Survey. In the Almeda area, Harris County, John Mayo and Martin Thompson made location for No. 1 Alexander Sharp, a 6,500-ft. Frio test located in the S. G. Haynie Survey. In Tyler County derrick is up for J. Z. Werby and others' No. 1 Hayes in the J. C. Boyett Survey.

TEXAS GULF COAST COMPLETIONS IN PROVEN FIELDS

Brazoria County

Hastings field: Stanolind Oil & Gas Co.'s No. 34-C Curkett, sand 6,063-80 ft., 488 bbl., ¼-in. choke. Stanolind Oil & Gas Co.'s No. 2 Randall, perforated casing 5,331-57 ft., 756 bbl., ¼-in. choke. West Columbia field: Frost & Dunnam's No. 3 Masterson, 5,220 ft., 62 bbl., ⅛-in. choke. Hogg Oil Co.'s No. 7 Hogg, sand 5,312-40 ft., 455 bbl., ¼-in. choke.

Chambers County

Anahuac field: Humble Oil & Refining Co.'s No. 44 Middleton, sand 7,209-64 ft., 674 bbl., ¼-in. choke. Barbers Hill field: Texas Gulf Producing Co.'s No. 29-B Kirby, 5,799 ft., 321 bbl., ¼-in. choke. South Cotton Lake field: Humble Oil & Refining Co.'s No. 3-C Lawrence, sand 6,508-12 ft., 584 bbl., ¼-in. choke. Humble Oil & Refining Co.'s No. 1-A Lawrence, perforated casing 6,485-90 ft., gas well.

Fort Bend County

Thompson field: John Blaffer's No. 5 Davis, sand 5,386-5,430 ft., 501 bbl., ¼-in. choke. Humble Oil & Refining Co.'s No. 21 Davis, sand 4,310-20 ft., 92 bbl., ⅛-in. choke.

Galveston County

High Island field: Stanolind Oil & Gas Co.'s No. 66 Cade, perforated casing 5,453-63 ft., 149 bbl., ⅛-in. choke.

Hardin County

Silsbee field: Republic Production Co.'s No. 29 Brooks, sand 6,926-38 ft., 470 bbl., ¼-in. choke.

Harris County

Bammel field: H. M. Harrell's No. 1 Ehrhardt, perforated casing 6,166-74 ft., gas well. Clinton field: Houston Oil Co.'s No. 1 Oates, perforated casing 3,170-85 ft., gas well. Friendswood field: Humble Oil & Refining Co.'s No. 10 Herman Hospital, sand 6,036-50 ft., 541 bbl., ¼-in. choke. Humble Oil & Refining Co.'s No. 18 West, 522 bbl., ¼-in. choke. Pieree Junction field: Rio Bravo Oil Co.'s No. 2 Hooks, 4,948 ft., dry and abandoned. South Houston field: Stanolind Oil & Gas Co.'s No. 2 Drilling District No. 10, 4,807 ft., 45 bbl., ¼-in. choke.

Jefferson County

Lovells Lake field: Humble Oil & Refining Co.'s No. 3-B Steinhagen, perforated casing 7,778-80 ft., 199 bbl., ⅛-in. choke. Stanolind Oil & Gas Co.'s No. 2-B Steinhagen, perforated casing 7,790-95 ft., 184 bbl., ⅛-in. choke.

Liberty County

Martha field: Stanolind Oil & Gas Co.'s No. 1 R. G. Palmer, perforated casing 8,110-15 ft., 78 bbl., 5/32-in. choke.

Matagorda County

Citrus Grove field: McDannald Oil Co.'s No. 1 Woodhouse, perforated casing 3,750-60 ft., dry gas well.

Orange County

Port Neches field: Texas Co.'s No. 9 Stark, perforated casing 5,960-74 ft., 163 bbl., ⅛-in. choke. Orange field: Flanigan Drilling Co.'s No. 1 Michel, sand 5,553-67 ft., 182 bbl., ¼-in. choke.

Polk County

Segno field: J. K. Dorrance's No. 5-A Wing, sand 8,105-30 ft., 576 bbl., ¼-in. choke.

Wharton County

Withers field: McDannald Oil Co.'s No. 1 Dice, sand 5,509-44 ft., 126 bbl., ⅛-in. choke.

Southwest Texas District

By F. L. SINGLETON

Hoffman Gas Field Produces Oil; E. White Point Extended

CORPUS CHRISTI, Tex., Dec. 4.—The newly opened gas field southwest of the Hoffman field, Duval County, was converted into an oil field with the completion of Magnolia Petroleum Co.'s No. 2 Weil. Sand, showing oil, was cored at 2,806-36 ft., total depth, and the well was completed for an initial production of 40 bbl. per day through a ½-in. choke with 200 lb. casing pressure. The well is in Survey No. 113, 1,367 ft. southeast of the discovery well, completed 2 weeks ago as a gas well at 2,654-61 ft. Production is from the Loma Novia sand.

In the eastern part of the county, northeast of the Benavides field, Frank Gravis' No. 1 Vaello, Robert Fletcher Survey, is drilling in shale below 5,364 ft., after two attempted drill-stem tests failed. Sand with a slight odor was cored at 5,090-95 ft. and at 5,122-23 ft. Sand and shale with an odor was cored at 5,124-26 ft. and at 5,156-57 ft.

In the Chiltipin field, Duval County, Gray & Wolfe's No. 1 Tom Graham flowed 40 bbl. of oil and an estimated 10,000,000 cu. ft. of gas daily, flowing through a ⅞-in. choke under a tubing pressure of 925 lb. The hole is bottomed at 4,817 ft. with 7-in. casing cemented at 4,790 ft. This is the third producer in the field.

In the south extension of the Mirando Valley field, Zapata County, Amsco Refining Co. purchased all holdings of Interstate Minerals, Inc., and E. B. Younger for a reported consideration of $450,000. The tracts involved in the deal are in the Refino Lopez and A. Martinez lands in Sections 253 and 113. The purchase included approximately 40 wells and considerable undeveloped acreage.

In Webb County, in the shallow Adami field, several wells were being completed and locations for several more were staked. Bridwell Employes' No. 1 Mable Adami topped sand at 984 ft. and the well was completed at a total depth of 987½ ft. for an initial production of 50 bbl. per day. Harry E. Poe Oil Co.'s No. 3 Adami cored sand at 964-73 ft. and casing was cemented for completion. Red Bank Oil Co.'s No. 1 Adami cored oil sand at 975-82 ft. and casing was cemented for completion.

In the same county, on the east flank of the old Bruni field, Tide Water Associated Oil Co.'s No. 7 Bruni, which in the previous week showed indications of opening production from the Tertiary Wilcox formation, is being plugged back for a production test in the Queen City formation at approximately 5,600 ft. This well blew out from a total depth of 8,959 ft. and ran wild for 24 hours before the hole bridged over. The company was unable to recover the drill stem, and will attempt to complete through perforated casing opposite the 5,600-ft. sand, which was logged as a gas sand. While there was a slight show of oil in the ditch at 8,959 ft., the operators are of the opinion that the blowout occurred from the 5,600-ft. sand.

The crew at Anderson-Prichard Oil Corp. and Mills Bennett Production Co.'s No. 1 D. E. Robinson, West Tuleta field, Bee County, is attempting to cut out the drill stem which was stuck, due to excessive gas pressure that occurred after coring a sand section in the Wilcox at 7,912-21 ft., the total depth.

In the Seadrift area, Calhoun County, Continental Oil Co.'s No. 1 Powderhorn perforated casing at 5,820-25 ft. and the well was completed as a gas well with tubing pressure 1,800 lb. and casing pressure 1,200 lb. The hole was drilled to a total depth of 5,901 ft. and 6-in. casing was cemented at 5,880 ft.

Another extension was apparently made at the East White Point field, San Patricio County as Commercial Drilling Co.'s No. 3 Date Dunn, M. Flores Survey, 2,000 ft. west of production, prepared for a production test. Sand showing gas was cored at 5,570-76 ft. and oil sand at 5,576-5,608 ft. The hole is bottomed at 5,621 ft.

The newly opened 5,000-ft. sand in the North Luby field, Nueces County, was apparently defined in one direction as Seaboard Oil Corp.'s No. 1-C LaPrelle recovered 3,200 ft. of salt water on a 15-minute drill-stem test at 5,079-86 ft., the total depth. A drill-stem test in the discovery sand at 4,370-87 ft. showed no pressure and recovered 240 ft. of salt water. The well is shut down and the hole may be carried deeper.

In La Gloria field, Jim Wells County, Magnolia Petroleum Co.'s No. 1 E. H. Stolze, ½ mile north of production, is flowing gas with a spray of distillate from perforated casing at 7,000-10 ft. Casing pressure was 3,150 lb. and shut-in casing pressure 3,125 lb. The same company's No. 1 W. C. Hornsby is bottomed at 7,219 ft. and casing was cemented for a production test.

Seven miles southeast of Hebronville, Jim Hogg County, Humble Oil & Refining Co.'s No. 2 Mestean Oil & Gas Co. recovered 200 ft. of salt water and a steady blow on a 30-minute drill-stem test at 5,424-30 ft. A second drill-stem test at 5,710-19 ft. recovered salt water and no working pressure. Additional showings were logged at 5,399-5,402 ft. and 5,402-05 ft., but due to mechanical trouble, no test was ever made of the section.

In the Clara Driscoll field, Nueces County, Wellington Oil Co. and Pan American Production Co.'s No. 1-B Clara Driscoll perforated casing at 7,748-60 ft. and is attempting to make a drill-stem test.

SOUTHWEST TEXAS COMPLETIONS IN PROVEN FIELDS

Aransas-San Patricio Counties

McCampbell field: Bay-Tex Oil Corp.'s No. 6 Conn Brown and Mills, perforated casing 7,157-71 ft., 186 bbl., ⅞-in. choke. Southern Minerals Corp.'s No. 1 Whitlow, perforated casing 7,147-50 ft., 94 bbl., 9/64-in. choke. Lopez field: Magnolia Petroleum Co.'s No. 2 Duval County Ranch Co., 2,966 ft., dry and abandoned. Lundell field: Government Wells Oil Co.'s No. 38 Lundell, sand 1,553-58 ft., 50 bbl., ¼-in. choke. Piedra De Lumbre field: Humble Oil & Refining Co.'s No. 11-E Duval County Ranch Co., 2,146 ft., 176 bbl., ½-in. choke. Southland field: Hiawatha Oil & Gas Co.'s No. 19 Southland Life Insurance Co., perforated casing 5,388-93 ft., 208 bbl., 5/32-in. choke.

Caldwell County

Salt Flat field: Wiegand Brothers' No. 10-A Briscoe, 2,718 ft., 40 bbl. oil and 60 bbl. salt water, pumping.

Calhoun-Victoria Counties

Heyser field: Gulf Oil Corp.'s No. 27-B Traylor, sand 5,478-90 ft., 120 bbl., 3/32-in. choke.

Duval County

Fitzsimmons field: Navarro Oil Co.'s No. 4 Mew, sand 4,246-56 ft., 156 bbl., 5/32-in. choke. Hoffman field: Cox, Hamon and others' No. 1 Foster, 2,907 ft., dry and abandoned. Longhorn field: M. M. Miller & Son's No. 15 fee, sand 4,900-4,905 ft., 110 bbl., 5/32-in. choke. Lopez field: Magnolia Petroleum Co.'s No. 2 Duval County Ranch Co., 2,966 ft., dry and abandoned. Lundell field: Government Wells Oil Co.'s No. 38 Lundell, sand 1,553-58 ft., 50 bbl., ¼-in. choke. Piedra De Lumbre field: Humble Oil & Refining Co.'s No. 11-E Duval County Ranch Co., 2,146 ft., 176 bbl., ½-in. choke. Southland field: Hiawatha Oil & Gas Co.'s No. 19 Southland Life Insurance Co., perforated casing 5,388-93 ft., 208 bbl., 5/32-in. choke.

Guadalupe County

Darst Creek field: Magnolia Petroleum Co.'s No. 9 Miller, sand 2,580-2,631 ft., 289 bbl., pumping.

Jim Hogg-Brooks County

Kelsey field: Humble Oil & Refining Co.'s No. 34 McGill, 4,743 ft., 124 bbl., 7/64-in. choke.

Jim Wells County

Ben Bolt field: Robert Bowles Oil Co.'s No. 1 Della Whattey, 5,475 ft., dry and aabandoned. Reynolds field: Tom Graham Oil Co.'s No. 7-A Mosser, 6,025 ft., dry and abandoned. Texas Gulf Production Co.'s No. 8-A Miller, perforated casing 5,160-63 ft., 124 bbl., ⅛-in. choke. Texas Gulf Production Co.'s No. 4-B Pustejuvsky, 5,667 ft., dry and abandoned. South Alice field: Tom Graham's No. 7-E Bankers Mortgage Co., perforated casing 5,326-28 ft., 75 bbl., 3/32-in. choke.

Kleberg County

Bird Island field: Pure Oil Co.'s No. 1 State Land, 8,400 ft., dry and abandoned.

McMullen County

San Jose field: Hamil & Smith's No. 6 Kountze, 1,273 ft., dry and abandoned.

Nueces County

Luby field: Humble Oil & Refining Co.'s No. 2 King. 5,058 ft., 117 bbl., ⅛-in. choke. Richard King field: Southern Minerals Corp.'s No. 10-B King, perforated casing 5,383-88 ft., 50 bbl. oil and 30 bbl. salt water, jetting. Riverside field: Stanolind Oil & Gas Co.'s No. 1 Thompson, perforated casing 4,897-99 ft., 21 bbl. oil, 16 bbl. salt water, ¼-in. choke. South Clara Driscoll field: Magnolia Petroleum Co.'s No. 2 Johnson, 5,630 ft., dry and abandoned.

Refugio County

Tomoconnor field: Quintana Petroleum Corp.'s No. 6-B Williams, sand 5,889-5,905 ft., 812 bbl., ¼-in. choke.

San Patricio County

East White Point field: O. W. Killam's No. 2 Taft Syndicate, sand 5,594-5,610 ft., 120 bbl., ¼-in. choke. R. A. Welch, perforated casing 5,637-65 ft., 142 bbl., ⅛-in. choke.

Starr County

Ricaby field: Moss & Owen's No. 5 Ricaby, sand 1,430-35 ft., 86 bbl., pumping. H. L. Staggs' No. 1 Ricaby, 1,516 ft., dry and abandoned.

Victoria County

Victoria field: Boyles Stewart and others' No. 1 Simon, perforated casing 2,550-58 ft., gas well.

Webb County

Volpe field: Magnolia Petroleum Co.'s No. 11 Volpe-Benavides, sand 2,481-88 ft., 50 bbl., pumping.

Zapata County

Mirando Valley field: Buffalo Oil Co.'s No. 2-D Hinnant, sand 1,974½-83½ ft., 32 bbl., pumping. Buffalo Oil Co.'s No. 3-D Hinnant, sand 1,987-94 ft., 32 bbl., pumping. Buffalo Oil Co.'s No. 4-D Hinnant, sand 1,980-87 ft., 34 bbl., pumping. Interstate Minerals Corp.'s No. 4-C Lopez, sand 1,775-88 ft., 45 bbl., pumping. Interstate Minerals Corp.'s No. 10 Lopez, sand 1,771-78 ft., 72 bbl., pumping. Interstate Minerals Corp.'s No. 17 Lopez, sand 1,769-83 ft., 81 bbl., pumping.

Slayer of Kentucky Oil Man Given Life Sentence

OWENSBORO, Ky.—Brit Jones, 18, Clay County native, paroled from the School of Reform, entered a plea of guilty in the McLean County Circuit Court to a charge of murdering J. M. Mildren, well-known oil operator last July. He admitted blocking a road and said that, when Mr. Mildren got out of his car to remove the obstruction, he shot him down and beat him to death with the gun stock. Jones said he wanted Mildren's car and drove away in it. He was given a life sentence.

North and East Texas

By
D. H. STORMONT

New Deep Sand Pool in Clay County Opened by Big Well

WICHITA FALLS, Tex., Dec. 4.—Clay County's fourth new deep oil pool, producing from an entirely new pay zone, was brought in as the week closed by Continental Oil Co. at its No. 1 O. O. Ross, 4 miles south of the town of Jolly and about 5½ miles north and slightly west of the Halsell 4,700-ft. pool. The well was acidized late Saturday and responded with a 45-minute flow over the derrick. Estimates rate the production as high as 4,000 bbl. daily and hail it as the most significant discovery well in Clay County's history.

Eight thousand gallons of acid were placed in the hole accompanied by mud and water. There was no oil load. The well kicked off a few hours later and flowed over the derrick for 45 minutes before being shut in. Production is from the Smithwick lime of the Bend series. Pipe is set at 5,342 ft. and saturated lime was drilled from 4,350 to 5,400 ft. The location is 1,650 ft. from the north and 330 ft. from the west lines of the William Walker Survey, Abstract 703. The position of the new pool opener bears out seismograph and soil-analysis surveys showing a large structure some 15 miles long and 5 miles wide extending in a north-south direction across the southwestern quarter of the county. The three other recently discovered deep pools are all located on the large structure but production in each pool is from a different level.

The staking of four deep wildcat tests in as many North Texas counties during the past week added further interest to the district's increasingly active wildcat exploration campaign. New wildcats were staked in Clay, Baylor, Montague and Archer counties.

Clay County's new wildcat was Shell Oil Co., Inc.'s No. 1 M. L. Henderson, 6,000-ft. test on the company's large block acquired several months ago just north of the town of Antelope in northern Jack County. The block lies on the Jack and Clay county line and in the extreme western part. Location is 990 ft. from the north and 1,294 ft. from the west lines of Block 2605, T.E.&L. Survey.

Baylor County's new wildcat test was Hall & Jordan Oil Co.'s No. 1 Mrs. G. E. Blackman, C SE NE Section 28, Block 3, H.&T.C. Survey, ½ mile south of the Wilbarger County line and 3 miles northwest of Lake Kemp. It will be drilled with rotary to 4,000 ft. The location is on a block consisting of the Blackman ranch. W. B. Omohundro, Wichita Falls operator and contractor, will drill the wildcat for the Oklahoma City operators.

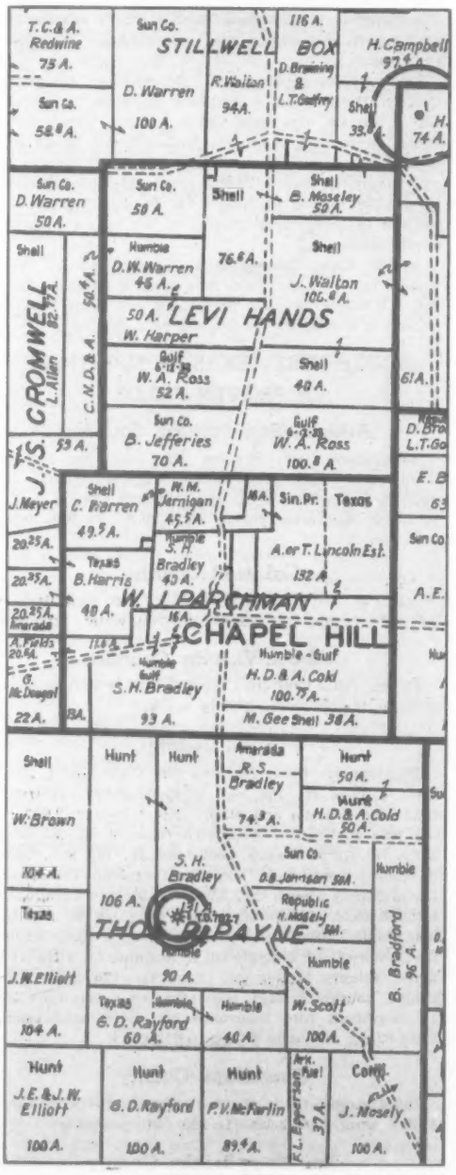
Montague County centered considerable attention as a half-mile-east outpost to the triple pay-zone Bonita (Benton & Holmes) pool indicated production in the granite-wash pay and a wildcat test was staked a mile and a half northwest of the production in the Rogers & Rogers pool. The Bonita pool's possible extension well is Continental Oil Co.'s No. 1 W. R. Rich, northwestern part of the northeast quarter of the Jaquez Survey. Saturation was tapped in granite wash from 3,649 to 3,708 ft., total depth being 3,740 ft. It is an old 2,925-ft. failure that was deepened to the new level. The outpost is reported to be checking about 25 ft. higher than Continental's No. 1 H. Braman to the west, which several weeks ago extended the pool a quarter mile to the east. Seven-inch casing has been cemented at 3,648 ft. in the new outpost and operators intend to drill the plug early this week.

New wildcat test northwest of the Rogers & Rogers pool is the William J. Payne of Oklahoma's No. 1 T. M. Baker, located 330 ft. from the south and east lines of the NW¼ of Lot 42, W. J. Wells Survey, Abstract 844. It is contracted to 5,000 ft. and will test both the 4,300-ft. and the 4,600-ft. Strawn pays of the field proper.

New wildcat for southern Archer County which will test the Bend series of basal Pennsylvanian is the Continental Oil Co. and Harry Hines' No. 1 J. L. Anderson, 330 ft. from the south and west lines of Block 23, South Anderson Ranch subdivision. It is 5 miles northeast of the town of Megargel and in the southwestern part of the county. It is an old hole drilled by Hines & Hancock and bottomed at 4,002 ft. New contract depth is 5,300 ft.

Several miles east of this deepening project, W. B. Hamilton's No. 5 Graham, in the S. Abercrombie Survey, Abstract 1492, wildcat test 1½ miles west of the town of Annarene, prospective pool opener from the Caddo lime for the past 2 weeks, is shut down for repairs. After being acidized with 10,000 and 500 gal. of acid at two treatments, the test was attempting to swab out acid load. Acid was injected through 69 perforations in casing from 4,753 to 4,768 ft.

Hardeman County, scene of two recent wildcat failures, received a new wildcat location during the week when A. Paul Gilbert, of Vernon, staked location for his No. 1 Robert Weekly, a 4,000-ft. rotary wildcat in Section 85, Block 16, H.&T.C. Survey. Location is 10 miles south of the town of Chillicothe.



Chapel Hill structure in Smith County is the hottest spot in eastern Texas as Shell Oil Co., Inc., drills ahead toward the deep Trinity series north of the area's discovery gas well. Sun Oil Co. has staked a deep location south of the discovery well

NORTH TEXAS COMPLETIONS

Archer County

British American Oil Producing Co.'s No. 1 T. F. Hunter, 4,678-4,705 ft., 1,032 bbl. Cato Oil Co.'s No. 1 O. T. Anderson, 4,347-86 ft., 650 bbl. Chapman & McFarlin's No. 3 L. F. Wilson B, 4,343-92 ft., 40 bbl. Chapman & McFarlin's No. 1 L. F. Wilson C, 4,298-4,340 ft., 800 bbl. in 7 hours. Hammon, Hanlon & Buchanan, Inc.'s No. 7 W. P. Ferguson B, 3,801-3,913 ft., 1,080 bbl. Ray Oil Co.'s No. 1 Thom, 3,750-70 ft., 511 bbl. C. W. Cahoon, Jr.'s No. 1 R. D. Andrews, 1,002 ft., dry. Fish Brothers' No. 1 J. S. Meiugin, 990 ft., dry. W. B. Hamilton's No. 6 C. E. Graham, 1,122-33 ft., 190 bbl. W. B. Hamilton's No. 1 F. C. Green C, 1,116-28 ft., 153 bbl. Shell Oil Co., Inc.'s No. 2 Colgan, 1,454-66 ft., 90 bbl.

Baylor County

British American Oil Producing Co.'s No. 4 F. C. Green D, 2,546-62 ft., 125 bbl. in 4 hours.

Clay County

George G. Golden's No. 1 G. E. Myers, 1,360 ft., dry. W. H. Metzner's No. 9-A Taylor, abandoned location.

Cooke County

Bridwell Oil Co.'s No. 10 J. R. Parkey, 712-18 ft., 65 bbl. O. L. Kiel's No. 1 Hays, 1,013-47 ft., 10 bbl. King Oil Co.'s No. 2 Joseph Weisman, 1,064 ft., dry.

Jack County

Bennett Oil Co.'s No. 1 R. W. Cantrell, 3,100 ft., dry. Champlin & Bass' No. 1 G. E. Winn and Lowrance and others, 3,221-66 ft., 375 bbl. Harper and others' No. 2 Winn & Lowrance, 3,236-46 ft., 404 bbl.

Montague County

George G. Golden, trustee's No. 1 E. J. Bouldin, 793-810 ft., 5 bbl. George G. Golden, trustee's No. 2 E. J. Bouldin, 810-15 ft., 8 bbl.

Wichita County

Magnolia Petroleum Co.'s No. 159 H. Reilly, 2,462 ft., dry. Bolin and others' No. 7 W. T. Waggoner, 1,686 ft., dry. J. E. Farrell's No. 32 Waggoner D, 3,776-3,831 ft., 800 bbl. Perkins, Cullum and Tide Water's No. 11 W. P. Ferguson, 3,740-3,808 ft., 388 bbl.

Wilbarger County

Lawson & Leavell's No. 2 W. T. Waggoner U, 1,320-30 ft., 200 bbl.

Young County

Cable Oil Co.'s No. 12 J. Williams, 570-78 ft., 7 bbl. W. G. Horn's No. 6 W. B. Gregg, 800 ft., dry.

EASTERN TEXAS

DALLAS, Tex., Dec. 4.—Lower Trinity series exploration in the eastern Texas district headlined the week's activity as result of the past few months' intense deep drilling campaign became apparent. The search for either Paluxy, Glen Rose or Travis Peak production continued little abated by an increasing Woodbine-sand play for the district. Limestone Coun-

ty's long-testing Glen Rose pool opener was completed and a new deep wildcat was staked on the large Chapel Hill structure of Smith County where Shell Oil Co., Inc., has a deep test drilling at the present time.

The regular Woodbine-sand activity showed a decided upturn during the week with 10 producers being finaled in the East Texas field as against none for last week. There were three completions in the Talco pool of Franklin and Titus counties and a completion in the Leon County portion of the Long Lake field, together with the abandonment of a dry hole each in Anderson and Henderson counties to keep the development active in the East Central Texas area.

Eastern Smith County's large Chapel Hill structure attracted considerable attention of operators in the district as the second attempt in recent weeks was being made to secure deep production. Sun Oil Co. announced location for a wildcat test south of the discovery well on the structure. The operation will be No. 1 Essie Belle Huddle, staked in the center of the west 40 acres of an 82-acre tract in the William Dickinson Survey. The site is approximately 2 miles south of the Hunt Oil Co.'s No. 1 Bradley, Payne Survey, which opened the area in June 1938, for gas and distillate production from the Glen Rose limestone at 7,527 ft. The company plans to start immediately on the test which is due to go to the Travis Peak, the third and lowest member of the Trinity series, and just underlying the Glen Rose limestone.

Two and one-half miles north of the Hunt discovery well on the structure, Shell Oil Co., Inc., is drilling ahead below 5,900 ft. in the Glen Rose, middle member of the Trinity series, which was topped at 5,818 ft. This test has established the Paluxy as a large gas reservoir by uncovering an estimated 15,000,000 to 18,000,000 cu. ft. of gas in a porous section from 5,746 to 5,821 ft., the Paluxy being topped at 5,533 ft.

Both the Sun and the Shell companies hope to be far enough down the flank of the structure to find oil in the middle Glen Rose or in the Travis Peak members. The Shell wildcat is checking considerably higher than was expected, showing that the structure may be very much larger than supposed.

Some 20 miles east of the Chapel Hill area of Smith County another deep 6,500-ft. Trinity series wildcat was preparing to start. It is the E. B. Whittington's No. 1 Kangerga Brothers, in the Ignacio Castro Survey, northwest corner of Smith County and just east of the edge of the East Texas field. The test was staked several weeks ago. Operators are rigging up for immediate drilling at the location which is on a 63-acre tract in the southeast corner of the Castro Survey.

Limestone County's long-testing Glen Rose field opener was gaged during the week at 13,700,000 cu. ft. of gas daily with 5 to 8 bbl. of distillate per 1,000,000 cu. ft. of gas. It is the Murray Samuell and S. J. Taylor's No. 1 Cannon Barron, 4 miles southwest of Groesbeck and in the W. G. McKinsey Survey. Completion was through a series of casing perforations at 5,584 to 5,611 ft. in the Glen Rose section. Operators have announced no plans for further development.

Failure of a closely watched deep wildcat, and the second for the company on their block was seen in Hunt County. The Westmount Oil Co.'s No. 1 Clark, W. H. Williams Survey, 1 mile northwest of Celeste, was preparing for abandonment after drilling to a total depth of 5,314 ft. The wildcat was drilled as a closed operation and tops have not yet been released by the company. It was originally contracted to 7,500 ft.

Woodbine Activity

Four new wildcats were located in the district during the week, one each being in Cherokee, Falls, Henderson and McLennan counties. The Cherokee County location was the C. C. Lanier's No. 1 W. O. Reagan, W. T. Smith Survey, 2½ miles east of Mixon. In Falls County A. H. Bell located his No. 2 Garrett in the J. Sanches Survey northeast of Lott. Henderson County's location was a new outpost operation for the one-well Rowe and Baker area just northeast of the Flag Lake pool. W. R. Manning, Houston operator, announced tentative location for No. 1 Rowe & Baker, center of the J. T. Childers Survey and approximately ½ mile northeast of the Tyler & Smith discovery well on the same tract. McLennan County's operation has spudded and is drilling below 470 ft. It is the T. M. Smart's No. 1 J. W. Mann, C. O'Campo Survey, 4 miles south of Waco.

EAST CENTRAL TEXAS COMPLETIONS

(24-hour gages)

Anderson County

A wildcat, Albert Baggett's No. 1 J. R. Gillispie, J. R. Ferguson Survey, dry and abandoned at total depth of 4,350 ft.

Henderson County

A wildcat, Roy Meyers and Harry Hines' No. 1 R. Mallory, T. S. Mitchell Survey, 5 miles southwest of Mabank, dry and abandoned at total depth of 3,510 ft.

Franklin County

In the Talco pool, Nathan Pipe & Supply Co.'s No. 4 L. Strickland, F. M. Bates Survey, 4,301-16 ft., 330 bbl., pumping. Texas Co.'s No. 8 Barker, B. H. Epperson Survey, 4,190-4,269 ft., 261 bbl., pumping.

Titus County

In the Talco field, Magnolia Petroleum Co.'s No. 1 E. V. Duke, George Dyer Survey, 4,340-46 ft., 240 bbl., pumping.

Leon County

In the Long Lake field, F. H. E. Oil Co. and Carter-

(Continued on Page 85)

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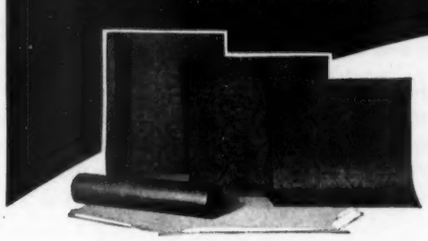

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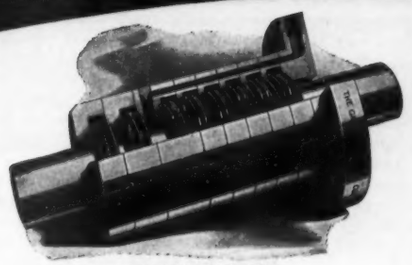

GARLOCK 875
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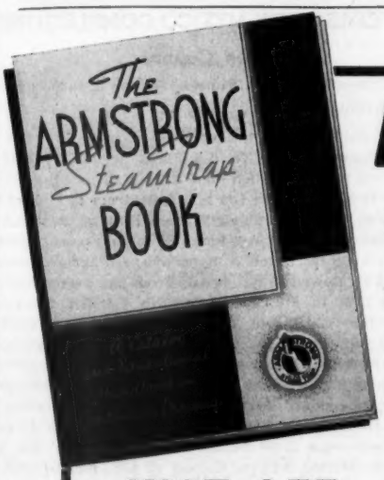

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ARMSTRONG MACHINE WORKS
868 Maple Street, Three Rivers, Mich.

Rocky Mountain Area

By
T. R. INGRAM

Lance Creek Leo-Sand Well Started at 60 bbl. Per Hour

DENVER, Colo., Dec. 4.—The best completion in the northern Rocky Mountain area was Argo Oil Co.'s No. 11-B Elliott, in Lance Creek, which made 60 bbls. an hour from Leo sand after plugging back from Joss sand, which showed 18 bbs. an hour on a drill-stem test. Cut Bank, in Montana, had three completions, one of which, Nadeau Brohters' No. 6 Farmers State Bank, is producing from both Sunburst and Cut Bank sands. The two others were better than average on swabbing tests, the Texas Co.'s No. 9 Tribal-122 making 236 bbl. and the Glacier Production Co.'s No. 2 Corregeux making 203 bbl. initial. Kevin-Sunburst had a 50-bbl. well in S. T. Scotland's No. 3-A McNamar. The Franco-Arizona test in Apache County, Arizona, was abandoned in granite at 2,592 ft.

New operations included one in Lance Creek, one in Cut Bank, two in Kevin-Sunburst, and a shallow test on the Salt Valley structure in Utah.

NEW MEXICO

Completions and new locations in the Loco Hills pool of Eddy County led the development in the Southeast New Mexico district. The week's results included the completion of Loco Hills' largest well and the staking of a new wildcat in Eddy County, Culbertson & Irwin, Inc.'s No. 1 Welch, C NW NW Section 19-20-31. It is about 10 miles south of the Loco Hills pool.

Largest initial production yet recorded in the Loco Hills pool was gaged at Yates & Witherspoon's No. 1 State, Section 1-18-29, which flowed 110 bbl. of oil through casing in 1 hour. It topped pay in sand at 2,686 ft. and is bottomed at 2,699 ft., in sand. The well was shot with 120 quarts from 2,672 to 2,699 ft.

Defining the south limits of the Halfway pool of western Lea County. Westlea Oil Co.'s No. 1-C Cleveland-Texas Co. is plugging to abandon at a total depth of 2,672 ft. It encountered a hole full of sulfur water from 2,670 ft. to total depth. Location is 330 ft. from the north and 1,980 ft. from the west lines of Section 21-20-32, ½ mile south of the field's discovery well. Westlea Oil Co.'s No. 1 A. C. Moore, east offset to the No. 1-C Cleveland-Texas Co. failure, is waiting for cement to set at a total depth of 950 ft. Continental Oil Co.'s No. 1-A-15 Langston, outpost three-quarters of a mile southeast, is drilling past 2,800 ft. in lime. It is reported checking some 135 ft. lower than normal.

A wildcat between the Maljamar and Halfway pools, Culbertson & Irwin, Inc.'s No. 1 J. S. Lea, NE NE Section 8-19-32, was underreaming casing at a total depth of 965 ft. Wildcat test in extreme southeastern Lea County, Leonard Oil Co.'s No. 2 Ginsberg, Section 7-25-38, was drilling below 3,229 ft.

Eddy County

Addison's No. 1 Sullivan, 660 ft. from N and E lines, Sec. 29-18-31. Drlg. 3,075 ft.
Kersey & Co.'s No. 1 Creek, 330 ft. from N and 1,650 ft. from W lines, Sec. 23-18-30. Drlg. 3,175 ft.
Knox & Brewer's No. 1 Fred Hess, 330 ft. from N and W lines, Sec. 21-16-29. C.&P.
Powell & Mathew's No. 1 Levers, 1,980 ft. from S and W lines, Sec. 33-18-29. Drlg. 2,089 ft.
Everts' No. 1 Greer, SE cor. Sec. 31-16-31. Drlg. 2,721 ft.
L. R. Manning's No. 1 Patton-McClay, 330 ft. from N and 1,650 ft. from E lines, Sec. 21-18-30. Drlg. 2,737 ft.
G. A. Grober's No. 1 Wright, 1,980 ft. from N and W lines, Sec. 25-18-29. Tstg. S.O.&G. 1,382 ft.; est. 10 B.O.P.D.; S.I. 1,711 ft.
McClure & Swift's No. 1 State, 660 ft. from N and 1,980 ft. from E lines, Sec. 20-19-20. Drlg. 2,008 ft.
Mac T. Anderson's No. 1 L. J. Root, 660 ft. from S and 660 ft. from W lines, Sec. 27-9-30. Drlg. 1,951 ft.
G. R. Burke's No. 1 State, NE NE NW Sec. 36-16-24. S.D.O. 2,300 ft.
Saunders' No. 1 Murdock, NW NW SW Sec. 4-18-29. Drlg. 2,760 ft.
Artesia Drlg. Co.'s No. 1 Hoffman, SE SE SE Sec. 14-17-24. W.O.C. 475 ft.
J. R. Cones et al's No. 1 Saunders, SE SE NW Sec. 13-17-27. S.O. 505 ft.; S.D.O. 600 ft.
L. E. Elliott's No. 1 Elliott, SE SE SE Sec. 24-18-29. S.S.O. 3,255-75 ft.; S.D.O. 3,435 ft.
Franklin Pet. Corp.'s No. 1 Masteller, NW NW NE Sec. 7-18-30. Drlg. 2,830 ft.
Franklin Pet. Corp.'s No. 1 Cappedge, NW SW NW Sec. 5-18-30. S.S.G. 3,118-23 ft.; drlg. 3,285 ft.
J. W. Elliott's No. 1 Cannon (O.W.D.D.), C SW SE Sec. 4-19-30. S.D.O. 3,209 ft.
Trojan Oil Co.'s No. 1 Grant, SW SW NE Sec. 33-20s-25e. S.O. 1,530 ft.; S.D.R. 1,580 ft.
Dodson Drlg. Co.'s No. 1 State, 2,310 ft. from N and 330 ft. from E lines, Sec. 17-16-29, ½ mile N of Nolen's No. 1 lies discovery well. C.&P.
Pittman's No. 1 State, 330 ft. from SW cor. Sec. 17-16-29, east offset to Nolen pool opener. Drlg. 735 ft.
Dodson Drlg. Co.'s No. 1 A. H. McElreath, 330 ft. from S and W lines, Sec. 3-16-29, 2½ miles NE of Nolen pool opener. Drlg. 1,460 ft.

Chaves County

H. E. Yates' No. 1 Johnson, 660 ft. from N and 1,980 ft. from W lines, Sec. 24-15-28. Drlg. 2,255 ft.
Meither's No. 1 J. W. Smith, 990 ft. from S and E lines, Sec. 30-11-25. W.O.C. 840 ft.
G. H. Cowden's No. 1 Brunson, 330 ft. N and W lines, Sec. 27-9s-30e. C.&P.
Caudill & French's No. 1-A Smith (O.W.D.D.), Sec. 1-4-29. S.D.R. 3,686 ft.
E. J. Fisher's No. 1 Hill, CSL S½ Sec. 8-15-25. S.D.O. 850 ft.
Tarkenton Bros.' No. 1 Peters, SE SE NW Sec. 33-11-25. S.S.O. 1,280-85 ft.; S.D.O. 1,324 ft.

Dona Ana County

Picacho O. & G. Co.'s No. 12 Armstrong, Sec. 15-23s-1w. W.O. csg. 2,620 ft.
Slack & Mahres' No. 1 Simmons, Sec. 35-22s-5e. S.D. 2,785 ft., T.D.; repairs.

Luna County

O. D. Berry's No. 1 Berry, SE SE SW Sec. 33-22s-10w. S.D.O. 1,000 ft.

Lea County

Barefield & Brooks' No. 1 Walker, 1,980 ft. from N and 660 ft. from E lines, Sec. 5-18-32. C.O. 3,660 ft.; flwd. by heads from sat. 3,685-3,700 ft.; S.I.; swbd. 80 B.O. P.D., will not flow naturally.
Leonard Oil Co.'s No. 1 Ginsberg, 1,980 ft. from N and 660 ft. from W lines, Sec. 7-25-38. Drlg. 3,229 ft.
J. D. Barefield's No. 1 Stroup, 1,980 ft. from N and E lines, Sec. 12-18-32. W.O. mch.
Culbertson & Irwin's No. 1 Lea, 660 ft. from N and E lines, Sec. 8-19-32. T.D. 965 ft.
Frank Farley's No. 1-A State, Sec. 18-21s-30e. Prep. drill plug; sat. 2,629-31 ft.; new pool opener; flwd. 1,000 B.O. in 18 hrs.; est. 1,500 B.O.P.D.; S.I. storage.
Argo Oil Corp.'s No. 1 Texas Co.-State, west offset to Westlea Oil Co. pool opener. S.I. storage; swbd. 100 B.O.P.D.; T.D. 2,657 ft.; putting on pump.
Westlea Oil Co.'s No. 1 Texas Co.-Cleveland, 2,310 ft. S of Westlea pool opener and 330 ft. from N and 1,980 ft. from W line, Sec. 21-20s-32e. S.D.O. 2,672 ft., sul. wtr.
Continental Oil Co.'s No. 1-A-15 Langston, 660 ft. from S and W lines, Sec. 15-20s-32e, ¾ mile SE of Westlea pool opener. Drlg. plug; 10-in. csg. 423 ft.

Otero County

Ernest's No. 1 Ernest, Sec. 20-25-7. S.D.O. 2,495 ft.
Otero Oil Co.'s No. 1 State, SE NW Sec. 5-22-10. S.D. 200 ft.

SOUTHEAST NEW MEXICO COMPLETIONS

Chaves County

G. H. Cowden's No. 1 Brunson, Section 27-9-30, abandoned location.

Eddy County

Allen-Pope & Fair's No. 5-A State, Section 36-17-29, abandoned location. Allen-Pope & Fair's No. 2-B State, Section 11-18-29, flowed 150 bbl. daily from pay logged from 2,648 to 2,676 ft. Bassett's No. 2-B State, Section 2-18-29, flowed 180 bbl. in 2 hours from pay logged from 2,631 to 2,656 ft. Dixon & Yates' No. 1-B Ballard, Section 1-18-29, flowed 45 bbl. hourly from pay logged from 2,724 to 2,750 ft. Me-Tex Oil Co.'s No. 1 Miller, Section 5-18-29, flowed 300 bbl. daily from pay logged from 2,566 to 2,615 ft. C. M. Pope, Jr.'s No. 1 State, Section 2-18-29, flowed 72 bbl. daily from pay logged from 2,645 to 2,654 ft. Shallow Rick Oil Co.'s No. 4 Hastie, Section 18-17-29, abandoned location. Underwood and others' No. 2-P Guy, Section 9-18-29, flowed 25 bbl. hourly from pay logged from 2,479 to 2,517 ft. S. P. Yates' No. 2 Brainard, Section 3-18-29, flowed 42 bbl. hourly from pay logged from 2,588 to 2,606 ft. Yates & Franklin's No. 1 Witherspoon, Section 1-18-29, flowed 110 bbl. hourly from pay logged from 2,668 to 2,699 ft.

Lea County

Humble Oil & Refining Co.'s No. 6-A State, Section 34-22-37, flowed 135 bbl. in 6 hours from pay logged from 3,438 to 3,665 ft. Magnolia Petroleum Co.'s No. 48 State-Bridges, Section 27-17-34, flowed 80 bbl. in 6 hours from pay logged from 4,475 to 4,600 ft. Skelly Oil Co.'s No. 1-R State, Section 36-16-36, flowed 165 bbl. daily from pay logged from 4,640 to 5,008 ft. Stanolind & Amerada's No. 1 Caylor, Section 6-17-37, flowed 59 bbl. daily from pay logged from 4,672 to 4,960 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc.'s No. 2 North Albuquerque, NE SE NW Sec. 19-11n-4e. Drlg. 4,650 ft.

San Juan County

Kutz Deep Test, Inc.'s No. 7 Govt., C NW NW Sec. 28-28n-10w. T.D. 560 ft.; W.O. 12½-in.
Angel Peak Oil Co.'s No. 8 Govt., C NW SW Sec. 13-28n-11w. Drlg. 1,720 ft.
Continental Oil Co.'s No. 100 Rattlesnake, NE NW NE Sec. 2-29n-19w. Drlg. L. at 6,180 ft.

San Miguel County

Southwest Drlg., Inc.'s No. 1 Conchas, NW NE Sec. 34-17n-21e. Drlg. 2,300 ft.
Ben E. Keith's No. 1-X McCune, SW SE SW Sec. 32-16n-12e. Drlg. 200 ft. in new hole.

Valencia County

C. A. Grober et al's No. 1 Fuqua, NE NE Sec. 19-5n-3e. S.D. 3,850 ft. to run 6⅝-in.

COLORADO

Adams County

Derby Dome O. & G. Co.'s No. 2 Baxter, C SE SW Sec. 2-3s-66w. T.D. 2,020 ft. in sd. and sh.; prep. to core.

Archuleta County

Boone Development Co.'s No. 1 Newton, SE NW SE Section 18-33n-1e, test on the Boone dome, is shut down for the winter at 1,211 ft. after setting the 8¼-in. at 1,195 ft.

Custer County

Henry Donnelly's No. 1 Hodge, SE NE Sec. 26-21s-69w. Drlg. 1,275 ft.

El Paso County

F. F. Hintze et al's No. 1 State, CEL SE SE Sec. 16-11s-60w. Cmtd. 13-in. at 540 ft. and drlg. ahead.

Fremont County

T. E. Maloney's No. 1, SE NW Sec. 34-19s-69w. S.D. 1,850 ft. after rng. 1,300 ft. of 5⅝-in. and 550 ft. of 4½-in.
Waterville Oil Co.'s No. 2 Persons, CWL NE NE Sec. 17-19-69w. S.D. 330 ft.

La Plata County

Nick Spatter's No. 1-X Bryce, C SW SW Sec. 31-33n-99w. T.D. 2,522 ft. in sd.; M.I. 5⅞-in.

Larimer County

L. R. Steele et al's No. 1 Bund, NE SW Sec. 7-3n-69w. Drlg. 1,338 ft.
Continental Oil Co.'s No. 1 Meyers, SW SE SW Sec. 19-8n-68w. T.D. 5,206 ft.; P.B. to 4,686 ft.; shot with 20 qt. at 4,464-4,686 ft.; W.O. pmp. equip.

Las Animas County

Hulme-Johnson-Allison's No. 1 Azar, SE SE NW Sec. 27-34n-58w. S.D. 2,190 ft.

Moffat County

Great Divide Pet. Co.'s No. 1 Wyatt, SE¼ Sec. 6-9n-92w. Spdg.
Cooperative O. & G. Co.'s No. 1 Gossard, CWL E½ E½ Sec. 29-5n-93w. Spd. and S.D.; will skid mch. and bld. standard rig.
Steamboat Springs Synd.'s No. 1 Sutton, NE NE SW Sec. 1-5n-96w. S.D. 2,125 ft. for csg.; H.F. brksh. wtr. in sd. (probably Sundance); T.D. 1,780 ft.

Park County

South Park Oil Co.'s No. 1 Lemar, NE NE SE Sec. 34-11s-75w. Drlg. 7,094 ft.; S.O. and G. below 7,070 ft.

Rio Blanco County

Texas Co.-California Co.'s No. 3 Unit, NE NE NE Sec. 27-3n-94w. T.D. 765 ft.; cmtd. 13⅜-in. at 750 ft. and S.D. for the winter.
Buford Oil Co.'s No. 1 Govt., C SW SW Sec. 16-1n-91w. Drlg. 4,160 ft.

Routt County

L. C. Craig and L. C. Moore's No. 1-X Irwin, C SW NE Sec. 33-7n-85w. Drlg. 2,090 ft.

Washington County

Thurman Oil Trust's No. 1 Ruby, NW NW SW Sec. 3-5s-52w. Drlg. 510 ft.

WYOMING

Big Horn

Yale Oil Corp.'s No. 2 Jones, Lot 59, approx. CEL NE SE Sec. 29-56n-97w. Drlg. 3,262 ft.
Frank S. Scott's No. 1 Robertson, SE SE SE Sec. 6-54n-93w. Drlg. below 645 ft.

Carbon County

The Ohio Oil Co. posted an advance of 5 cents per barrel for Medicine Bow crude, effective November 23, when movement of oil from the field through the new pipe line of the Utah Oil Refining Co. to Salt Lake City began. New prices range from $1.24 for 55.0 to 55.9 gravity after stabilization, to $1.31 for 60 and above.

Martin & Gaylord are preparing to test gas sands in their No. 1 Horne Brothers, on the Horne Valley structure. The 6-in. will be cemented at 1,080 ft. on top of the Lakota sand at 1,118-78 ft., which had a show of oil and gas. It had a gas sand at 750-820 ft. which gaged 12,000,000 cu. ft., and untested gas sands at 986-1,000, 1,005-36, and 1,118-53 ft.

Sinclair-Wyoming Oil Co.'s No. 4-E, C SE SW Sec. 29-26n-87w. Loc. (first report).
Ohio Oil Co.'s No. 15 Harrison & Cooper, SE NE NW Sec. 2-19n-78w. Drlg. 1,165 ft.
Frank M. Johnson's No. 1 Govt., C SE SE Sec. 22-24n-88w. Drlg. 910 ft.
Martin & Gaylord's No. 1 Horne Bros., CNL NW SW Sec. 22-22n-78w. T.D. 1,200 ft.; cmtd. 6-in. at 1,080 ft.; prep. to test.
Ohio Oil Co.'s No. 1 University, SW SW SW Sec. 26-20n-78w. T.D. 3,579 ft.; redrld. to 3,476 ft.; swbg. and C.O.
Albert Dev. Synd.'s No. 1 Boeke, SW NW Sec. 18-25n-79w. Drlg. hd. rock 500 ft.; no W. to this depth.
Producers Oil Co.'s No. 1 Lake Valley, CNL Sec. 14-20n-88w. Drlg. 3,730 ft.

Converse County

New Era Fuel Co.'s No. 1 Pestal, SE NE NE Sec. 32-32n-69w. Drlg. 568 ft.; 6 bbl. per day at 533 ft.
Blue Ridge Oil Co.'s No. 1 Prokesh, SW NW SE Sec. 29-32n-69w. Drlg. 615 ft.

Fremont County

Tropic Oil Co.'s No. 1 Govt., C SE SW Sec. 34-27n-90w. T.D. 3,495 ft.; U.R. 4¾-in. to bttm. to test S.O. in Lakota.
Yellowstone Oil Co.'s No. 6 Govt., C NE NE Sec. 33-38n-93w. Spdg.
Sinclair-Wyoming Oil Co.'s No. 11 Sand Draw unit. CSL NE NE Sec. 15-33n-95w. T.D. 4,290 ft. in sh.; prep. to run Schlumberger survey.
Consolidated Oil Properties' No. 3 Ewart, C SW SE Sec. 16-1n-1w. T.D. 1,530 ft.; C.O. at 780 ft. after shot to test S.O. at 840-45 ft.; W. in Tensleep at 1,502 ft.

Hot Springs County

John W. Selby's No. 1 Kyne, SW NW Sec. 22-43n-92w. Drlg. 443 ft.; 8¼-in. at 405 ft.; W. at 295-305 ft.
J. W. Bales' No. 1 Govt., CWL NW SE Sec. 21-42n-90w. T.D. 805 ft.; M.I. 12½-in. csg.

Lincoln County

H. C. Harris et al's No. 1 Govt., SE NW NW Sec. 23-21n-117w. Drlg. 2,410 ft.

Natrona County

The Continental Oil Co.'s No. 1 McGrath, a wildcat on North Geary, stopped at 7,320 ft. to test upper horizons before going on down to the Tensleep. It ran 5,057 ft. of 7-in. and cemented it 50 ft. in the red beds with 450 sacks. Pipe then will be gun-perforated opposite sands in the Dakota and Frontier and tests made. The hole later will be carried down to test the Tensleep and results will have an important bearing on what may be expected in that horizon not only on this structure but on Midway and Cole Creek.

General Pet. Corp.'s No. 1-21-G, NW NW NW Sec. 21-35n-77w. R.U.R.
Iron Creek Oil Co.'s No. 1, CWL SW NW Sec. 11-32n-82w. T.D. 721 ft.; trying to drill by lost bit; Iron Creek dist.
Continental Oil Co.'s No. 1 McGrath, C NW SW Sec. 15-34n-78w. T.D. 7,320 ft.; cmtd. 7-in. at 7,057 ft.; will perf. and test.
Connelly Drlg. Co.'s No. 1 State, SW SW NW Sec. 36-36n-81w. Drlg. 1,450 ft.; 8¼-in. at 1,408 ft.
Summit Oil Co.'s No. 2 Govt., NW NE NE Sec. 21-33n-80w. S.D. 960 ft.

Niobrara County

Lance Creek had one completion in Argo Oil Co.'s No. 11-B Elliott, SE NE SW Section 5-35n-65w, an inside well. It was drilled to 5,503 ft., into the new Joss sand, and with packer set at 5,447 ft., it made 18 bbl. per hour in that sand on a Halliburton test. It was then plugged back to 5,310 ft. and completed in Leo sand, top at 5,260 ft., for 60 bbl. an hour, or at the rate of 1,440 bbl. per day, after acidizing with 1,000 gal. Engineers are now engaged in making a study of the sand conditions in the field, and the opinion is expressed that the Joss, which lies below the Leo, gives evidence of being productive over the entire field instead of being localized on the west side. Most of the Leo sand wells now are being drilled down to the Joss and then plugged back after testing, but some wells outside of the unit or in which the Leo made a poor showing, are being produced from the new horizon.

One new operation was reported in the Continental Oil Co.'s No. 5 Apex-3, which is outside of the unit. It will go to the Leo.

Continental Oil Co.'s No. 5 Apex-3, NW SE SW Sec. 34-36n-65w. Loc. (first report).
Minnelusa Oil Corp.'s No. 1-B Joss, NE SW NW Sec. 7-35n-65w. Spdg. 60 ft.
Minnelusa Oil Corp.'s No. 4 H. & M., NE NE SE Sec. 7-35n-65w. Rig; drlg. w.w.
Ohio Oil Co.'s No. 4 Cash-1, NW NE SW Sec. 4-35n-65w. Drlg. 3,161 ft.
Continental Oil Co.'s No. 5-B Diehlman, NW SE NE Sec. 7-35n-65w. Drlg. r.b. 4,619 ft.
Minnelusa Oil Corp.-MacKinnie O. & D. Co.'s No. 7 Thompson, SE NW NE Sec. 7-35n-65w. Drlg. 3,573 ft.
Argo Oil Co.'s No. 1 Ong, SE SE SW Sec. 31-36n-65w. Drlg. 3,595 ft.
A. B. Cobb & Co.'s No. 5 Novick, NE NE NW Sec. 6-35n-65w. Drlg. 3,135 ft.
Ohio Oil Co.'s No. 13 Carrie Putnam, C NW NW Sec. 4-35n-65w. Drlg. r.b. 4,133 ft.; basal Sundance 4,005-40 ft.
Continental Oil Co.'s No. 6 Sam Joss, NW NW NE Sec. 6-35n-65w. Drlg. sd. and sh. 4,199 ft.
Continental Oil Co.'s No. 6-A Diehlman, NW NE NE Sec. 7-35n-65w. Drlg. r.b. 4,351 ft.
Continental Oil Co.'s No. 5-A Diehlman, SE NW NW Sec. 8-35n-65w. Drlg. r.b. 4,315 ft.; T. basal Sundance 4,135 ft.
H. D. Moore et al's No. 1 Berggren, SE NW Sec. 23-35n-63w. T.D. 2,242 ft.; T. Leo 2,228 ft.; rng. 7-in.
F. F. Hintze et al's No. 1 Wright-Govt., C NW SE Sec. 30-36n-63w. T.D. 4,964 ft.; cmtd. 7-in. at 4,617 ft. and perf. to test.
Fall River Prod. & Roy. Co.'s No. 1 Govt., CSL SE SE Sec. 35-40n-61w. T.D. below 2,662 ft.; prep. to test.
Continental Oil Co.'s No. 5 Apex-3, SE NE SW Sec. 34-36n-65w. Cg. dol. and sd. 5,546 ft.
Continental Oil Co.'s No. 4 Apex-1, NW NE NE Sec. 34-36n-65w. Cg. dol. 5,465 ft.

Park County

Mule Creek Oil Co.'s No. 1, Lot 51, Sec. 9-46n-101w. Drlg. 1,900 ft.
Dry Creek Oil Co.'s No. 1 Govt., Lot 2 (NW NE SW) Sec. 9-50n-100w. T.D. 1,157 ft.; M.I. mch. to D.D.

Platte County

Glentop Expl. Co.'s No. 1 Millikan, NE SE NE Sec. 18-30n-67w. T.D. 626 ft.; setting 8¼-in. on bttm. for W.S.O.

Sublette County

Texas Co.'s No. 2-E, SW NW Sec. 27-27n-113w. Drlg. 228 ft.; 13-in. cmtd. 83 ft.
North La Barge Oil Co.'s No. 2 Govt., CEL SE NE Sec. 28-27n-113w. Drlg. 250 ft.
Marvel Oil Co.'s No. 1 Govt., NE NE SE Sec. 28-27n-113w. Cmtd. csg. 80 ft.
North La Barge Oil Co.'s No. 1 Govt., SW NE SE Sec. 28-27n-113w. Drlg. 825 ft.
Wyoming Pet. Corp.'s No. 1 Budd, C NE NE Sec. 10-29n-113w. S.D. 2,870 ft.; repairs.
Wyoming Pet. Corp.'s No. 2 Govt., SE cor. Sec. 3-29n-113w. Spdg.
California Co.'s No. 1 Unit 1, C SW NE Sec. 14-31n-109w. T.D. 10,003 ft.; cmtd. 7-in. at 8,509 ft.; fsg. D.P.; 8,000 ft. rec.; remainder coming out.

Sweetwater County

Vermilion Oil Co.'s No. 2 Govt., SW cor. Sec. 7-12n-99w. Drlg. below 1,500 ft.
Sinclair-Wyoming Oil Co.'s No. 88-A, NW SE SW Sec. 11-26n-90w. Drlg. 2,000 ft.
Sinclair-Wyoming Oil Co.'s No. 87-A, SW SE SE Sec. 3-26n-90w. T.D. 2,204 ft.; tstg.
Wyoming-Calif. Pet. Co.'s No. 2 Govt., CWL NW SW Sec. 24-17n-104w. T.D. 2,885 ft.; fsg. csg. shoe.

Uinta County

Stove Creek Oil Co.'s No. 1 Govt., NE SW NE Sec. 26-14n-119w. T.D. 2,010 ft.; U.R. 8⅝-in. to bttm.

Weston County

Osage Trust Co.'s No. 5, SW SE NW Sec. 13-46n-64w. Loc.
Whedon Oil Co.'s No. 20, NW NW SE Sec. 16-46n-64w. Drlg. 60 ft.
John Brorphy's No. 1 Hansen, NW NE NW Sec. 13-44n-63w. M.I.M.
Gose Oil Synd.'s No. 1, NE cor. Sec. 28-47n-63w. Cmtd. 4¾-in. at 4,918 ft.
Hugh Updike's No. 4, CEL NE NE Sec. 36-46n-64w. Drlg. below 1,400 ft.
Bruce C. Teeter's No. 1 State, SW SW SE Sec. 36-32n-61w. T.D. 2,287 ft. cmtd. 6¼-in. on top Leo sd. at 2,286 ft.; W.O.C.

MONTANA

Carbon County

Ohio Oil Co.'s No. 9 Souders, C NE SW Sec. 2-7s-21e. T.D. 5,511 ft.; pumping W. only.
Minnelusa Oil Corp.-Henderson Prod. Co.'s No. 1-H-11-Elk-11, SE SE NW Sec. 35-9s-23e. T.D. 2,486 ft.; cmtd. 8⅝-in. at 2,406 ft.; R.U.C.T.
R. C. Tarrant's No. 2 McKay, C SE NW Sec. 4-6s-18e. T.D. 2,525 ft.; U.R. 8⅝-in. to set at 2,355 ft.; S.O. in Dakota 2,450-80 ft.
R. C. Tarrant's No. 2 Heare, NW SE NW Sec. 14-6s-19e. T.D. 1,400 ft.; U.R. 10-in. to land at 600 ft.
Miracle Oil Co.'s No. 2 Govt., CWL NE SE Sec. 3-6s-23e. S.D. 2,338 ft. (C.D.).

Choteau County

Security Pet. Corp.'s No. 1 Johnson, C NE NE Sec. 23-26n-3e. T.D. 1,991 ft.; U.R. 6⅝-in. to set below Sunburst sd.

Flathead County

Clark W. Beauchamp's No. 1, CSL SW SW Sec. 2-27n-20e. S.D. 150 ft.; to M.I. rig.

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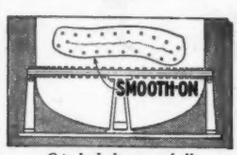

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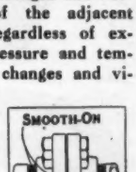

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Fergus County

E. & M. O. & G. Co.'s No. 2 fee, CEL SE SE Sec. 4-22n-18e. Spdg. 30 ft.
Baugham & Singley's No. 1 Skaggs, C NW SW Sec. 7-15n-20e. T.D. 1,090 ft.; rng. 3 1/16-in. to bttm.

Glacier County

Cut Bank had three completions, two of which were better than the average, and one new operation.

Texas Co.'s No. 9 Tribal-122, CSL SW SW Section 32-33n-5w, in the southern part of the field, was completed at 2,955 ft. and swabbed 235 bbl. first 24 hours from the Cut Bank sand at 2,912-53 ft., with the main pay at 2,938-51 ft.

The Glacier Production Co.'s No. 2 Corregeux, SW SW NW Section 21-33n-5w, swabbed 203 bbl. first 24 hours at 2,994 ft., total depth, from Cut Bank sand at 2,955-91 ft., the main pay being at 2,978-91 ft.

Nadeau Brothers' No. 6 Farmers State Bank, CEL NE¼ Section 17-33n-5w, was not given a swabbing test, but pumped 39 bbl. first day and 47 bbl. second day at 2,932 ft. It had production in both the Sunburst and Cut Bank sands. The Sunburst was at 2,820-53 ft., with the first show of oil at 2,829 ft. and the main pay at 2,843-53 ft. This sand was rated at 20 bbl. per day. The Cut Bank was at 2,890-2,910 ft., with the main pay in the last 10 ft. Seven-inch casing was cemented at 2,838 ft. and 72 ft. of 5 3/16-in. liner was landed at 2,897 ft.

A. B. Cobb's No. 1 Osuri, C SW NW Sec. 30-37n-4w. Loc. (first report).
Texas Co.'s No. 2 State M-246, C NE NE Sec. 36-34n-6w. Spdg. 60 ft.
A. B. Cobb-T. T. Co.'s No. 1 Unit D, C SW NE Sec. 18-36n-5w. M.I.M.
Glacier Prod. Co.'s No. 1 Minette, C NE NW Sec. 34-33n-5w. Spdg. 200 ft.
Texas Co.'s No. 3 Govt., C NE SW Sec. 17-32n-5w. Drlg. 1,140 ft.; Colo. 610 ft.; 10¾-in. at 640 ft.
Cobb-Reagan's No. 4 Jackson, SW SW SE Sec. 5-32n-6w. R.U.R.
Texas Co.'s No. 3 Tweedy, CWL NW NE Sec. 21-35n-6w. Drlg. 2,550 ft.
Texas Co.'s No. 2 Lindquist, C SW SE Sec. 17-32n-5w. Drlg. 1,210 ft.; Colo. 495 ft.; 10¾-in. at 570 ft.
M. R. Wagner, tr.'s No. 2-X Tribal-173, NE SE SE Sec. 12-32n-6w. Drlg. 2,750 ft.
Glacier Prod. Co.'s No. 2 Rigney, C SE SW Sec. 35-36n-6w. Drlg. 2,690 ft.
Texas Co.'s No. 3 Hessler, C SE NW Sec. 20-33n-5w. Drlg. 1,780 ft.

Hill County

J. Gudgel's No. 1 Mancin, SE NE NW Sec. 19-37n-15e. Drlg. 1,160 ft.; S.G.
Independent Natural Gas Co.'s No. 2 Stranahan, C SE SW Sec. 14-32n-17e. Loc. (first report).

Liberty County

Coolidge & Coolidge's No. 1 Forseth, CEL SE NE Sec. 8-35n-4e. Drlg. 1,535 ft.

Toole County

Kevin-Sunburst had one completion and two new operations. S. T. Scotland's No. 3-A McNamar, NW NE SW Section 29-35n-3w, is pumping 50 bbl. per day with no water at 1,774 ft., total depth. Sunburst sand was at 1,481-1,520 ft. It was acidized with 500 gal.

Imperial-Craig's No. 1 Gauss, C SW NE Section 18-35n-1w, in the northeastern part of the field, which has been receiving renewed interest recently, is now pumping 94 bbl. of oil and 1 bbl. of water per day. It was completed last month at 1,626 ft. for 35 bbl. per day, natural flow. Subsequently it was acidized.

A. Beardslee's No. 11 Swears, SW SE NE Sec. 9-35n-2w. Drlg. 825 ft. (first report).
Big West Oil Co.'s No. 15 Dahlquist, CSL SE SE Sec. 21-35n-3w. Spdg. (first report).
Casper T. Olen's No. 9 Engemoen, NW NE NW Sec. 14-35n-2w. Spdg. 40 ft.
L. J. Yealy's No. 14 Shaw, NW SW NE Sec. 35-36n-2w. R.O.G. (first report).
Preval & Shay's No. 4 Govt., NW NW SW Sec. 11-35n-3w. Drlg. 1,800 ft.; Sunburst 1,540-67 ft.; Ellis 1,798 ft.; S.O.&G.; cmtd. 7-in. at 1,720 ft.
Lemac Oil Co.'s No. 1, C NE NE Sec. 27-36n-2w. S.D. 200 ft.
Big West Oil Co.'s No. 14 Dahlquist, SE SW SW Sec. 21-35n-3w. T.D. 1,752 ft.; tstg.
Nepstad-Montgomery-Fargher's No. 2 Haugen, SE SE SW Sec. 2-35n-3w. T.D. 1,851 ft.; first break 1,836 ft.; second break 1,851 ft.; will acd.
Frazier & Smith's No. 2 Van Note, NE SW NW Sec. 30-35n-2e. S.D. 1,380 ft.
Coolidge & Coolidge's No. 1 Maley, SW NE SE Sec. 31-36n-1w. S.D. 100 ft.
Kippen O. & G. Co.'s No. 1 Solberg, SE SW NE Sec. 20-35n-3w. T.D. 1,904 ft.; P.B. to 1,896 ft.; acid.; prep. to test.
W. E. Rice Co.'s No. 4 Kearns, Lse. 8, C W½ E½ SE Sec. 18-35n-2w. T.D. 1,570 ft.; rng. 6⅝-in.
C. L. Smith, Agt.'s No. 1 Govt., SW SE NW Sec. 13-35n-2w. T.D. 1,345 ft.; fsg.
R. G. Parrent's No. 1 Holbrook, C NW NE Sec. 2-36n-3w. S.D. 1,370 ft.

Yellowstone County

Riverton Oil Co.'s No. 1 Fox, CEL NW NE Sec. 14-2n-23e. T.D. 2,150 ft.; cmtg. caves; will U.R. 6⅝-in. to set on bttm.

UTAH

Grand County

Big Six Oil Co., which is one of the pioneers in the Colorado River district, is rigging up for a shallow test to the Dakotas at 500 and 800 ft. on the Salt Valley structure to the northwest of the Cane Creek dome. Several geologists have expressed the belief that oil found a number of years ago on Cane Creek had migrated through fissures from a nearby structure, and H. W. C. Prommel, one of the first to geologize the district, identified this probable source as the Salt Valley fold.

Big Six Oil Co.'s No. 1 Govt., SE¼ Sec. 23-22s-19e. R.U.C.T. (first report).
Cane Creek Oil Co.'s No. 2 Shaffer, NW SW SW Sec. 31-26s-21e. S.D. 3,260 ft. for repairs.

Daggett County

Mountain Fuel Supply Co.'s No. 4 Murphy, SW SE SW Sec. 21-3n-24e. Drlg. 2,150 ft.

SOUTH DAKOTA

Harding County

South Dakota State Roy. Co.'s No. 1 State, SW NW Sec. 35-18n-1e. Cg. 7,240 ft.

ARIZONA

The Franco-Arizona Oil Co.'s No. 1 Government, SE SE NE Section 14-14n-26e, Apache dome, Apache County, encountered granite at 2,566 ft. and was abandoned at 2,592 ft.

Illinois Fields

(Continued from Page 65)

from north and 188 ft. from east lines of SE SW SE Section 2-18n-8e, of fourth principal meridian, was drilling at 190 ft.

In Montgomery County A. R. Taylor's No. 1 Street, 13 ft. from north and 330 ft. from west lines of SE¼ Section 31-11n-5w, spudded and shut down.

In Richland County Pure Oil Co.'s No. 1 Heap, C E½ SW NE Section 30-5n-10e, is a location.

In Marion County A. J. Hausman and others' No. 2 Majonnier, SW NE SW Section 28-4n-1e, Patoka townsite, moving in material to deepen an old well to the Devonian lime.

In Clinton County O. W. Burroughs and others' No. 1 Adams, SE SW SE Section 12-3n-1w, drilling at 450 ft. Benoist and others' No. 1 Benoist, 220 ft. from east and 1,110 ft. from south lines of SE NE Section 24-3n-1w, rig up.

In Clay County William Bell's No. 1 Tackett, near C N½ SE SE Section 5-2n-6e, set 10-in. casing at 175 ft.

In Clinton County Paul Mosebach's No. 1 Maddox, SW SW SW Section 4-1n-3w, is a location for a Devonian-lime test.

In Wayne County Stocker's No. 1 Creighton, SE SW NW Section 9-2s-8e, was drilling at 920 ft.

In Washington County Taylor Drilling Co. and others' No. 1 Pelka, NW SW SW Section 25-3s-3w, rig up.

In White County Kingwood Oil Co.'s No. 1 Bailey, NW SW NW Section 2-7s-9e, rigging up rotary. Bates & Lichliter's No. 1 Aud, NE NE SW Section 27-6s-9e, moving in rotary.

In Randolph County Alvin F. Fisher's No. 1 Wehtman, SW cor. NE NW Section 2-6s-5w, fishing at 1,457 ft.

In Jackson County M. C. Trumbull's No. 1 Bennett, C N½ NW NE Section 2-9s-5w, water at 1,470 ft., shut down at 1,575 ft., with the hole full of water.

In Wabash County Yandell Rogers' No. 1 Holderby estate, NE NE NW Section 35-5s-9e, drilling at 1,320 ft.

In the Storms field in White County Exchange Oil Co.'s No. 2 Storms, SE NW NE Section 14-6s-9e, flowed 75 bbl. of oil and 15,000,000 cu. ft. of gas from a total depth of 2,287½ ft., casing set at 2,267 ft. Exchange Oil Co.'s No. 1 Storms, SE SE NW Section 14-6s-9e, Waltersburg sand at 2,261-2,309 ft., flowed 592 bbl. of fluid in 11 hours, 60 per cent mud and 1½ per cent salt water and about 1,000,000 cu. ft. of gas. Neither well was completed.

In Gallatin County Delta Drilling Co.'s No. 1 Wineberger, W½ NW SW Section 21-9s-9e, St. Louis lime top at 2,670 ft., total depth 2,700 ft., will make a Schlumberger test.

Progress of Outposts

In Ford County Nelson, Brown and others' No. 1 Stroh, NE SE NW Section 19-24n-7e, fishing at 1,505 ft.

In McDonough County Charles Measley's No. 1 Cummings, NE cor. NW NE Section 21-4n-4w of fourth principal meridian, drilling at 205 ft.

In Peoria County Algona Oil Co.'s No. 1 Cramer, SE SE SW Section 27-8n-5e of fourth principal meridian, drilling. Blue Bell Oil Co.'s No. 1 Kyle, NW SW NW Section 17-8n-6e, shut down for repairs at 565 ft.

In Tazewell County H. V. House's No. 1 Greening, NW NW SE Section 28-24n-2w, Devonian lime top at 1,104 ft., with a showing of oil, drilling at 1,107 ft.

In Coles County East Oakland Syndicate's No. 1 Temple, SW cor. SE NE Section 36-14n-10e, total depth estimated at 2,240 ft. (a tight well), swabbing water. Trulock & Mumford's No. 1 Trulock, SE SE NE Section 7-12n-14w of second principal meridian, drilling at 400 ft. Koder's No. 1 Horseley heirs, SE NW NE Section 31-12n-10e, drilling at 1,141 ft.

In Edgar County Sanders & Walton's No. 2 Weaver, NW SW NW Section 24-14n-14w of second principal meridian, drilling at 280 ft., small showing of oil at 250-60 ft.

In Christian County A. Moore and others' No. 1 Meyers, SE SW SE Section 7-13n-1e, drilling at 20 ft.

In Clark County F. D. Strickler's No. 1 McFarland, NW NE SW Section 19-10n-13w, top of the Trenton 2,683 ft., drilling at 2,785 ft.

In Shelby County Turner's No. 1 Hoagland, Section 14-9n-4e, drilling at 1,672 ft.

In Fayette County Max Pray's No. 6 Ferguson, C N½ NW NW Section 18-7n-3e, Devonian lime at 3,165 ft.,

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showing of oil at 3,237-41½ ft., total depth 3,246 ft. Schlumberger test showed water. Max Pray's No. 1 Seibert, NW cor. Section 10-7n-3e, had McClosky lime at 1,840-50 ft., and St. Louis lime top at 1,955 ft., and was drilling at 2,550 ft.

In Effingham County, Edwin Barr's No. 1 Dammerman, NW cor. SW¼ Section 18-8n-4e, drilling at 1,400 ft.

In Bond County Paul Harr had pits dug for No. 1 Thacker, C E½ NE Section 29-7n-4w. W. N. Lee and others were underreaming 6-in. casing to 1,427 ft. in No. 1 Thomas Sharp, NE SW SE Section 27-7n-4w. Devonian Oil & Gas Co.'s No. 1 Edwin Ambuehl, NE SE NW Section 22-6n-4w, was shut down for orders at 1,916 ft. It had 900 ft. of fluid in the hole. Central States Oil Co. made a location for No. 1 Oswalt, NW SE SW Section 21-6n-4w. Bond Oil Co. was swabbing to test saturated lime at 1,853-56 ft., total depth.

In Effingham County Kingwood Oil Co.'s No. 1 Reichhelm, NE NE NE Section 21-6n-6e, had St. Louis lime at 2,768 ft.; drilled a soft lime at 2,883-85 ft., which had an odor of oil; cored at 2,884-89 ft. and 2,889-94 ft., recovering tight, bleeding dolomite; drilled to 2,956 ft. and ran Schlumberger; set 7-in. casing at 2,872 ft. and the crew was waiting for cement to set. Paul Doran's No. 1 Toehler, NW NW SE Section 29-6n-7e, was drilling at 1,460 ft.

In Richland County Pure Oil Co.'s No. 1 Glossbrenner, SE cor. SW SW NW Section 31-5n-10e, Ste. Genevieve lime at 2,802 ft., Fredonia lime at 2,831 ft., pay at 2,836-55 ft., flowed 438 bbl. of oil in 12 hours, still testing.

In Clay County Dick Burnett's No. 1 Smith, NE cor. SW¼ Section 21-5n-5e, shut down for orders at 2,395 ft., 8 ft. in the Aux Vases sand.

In Lawrence County W. W. Willis' No. 1 Prather, C NW SE Section 18-4n-10w of second principal meridian, drilling at 28 ft.

In Clinton County International Oil Co.'s No. 1 Adams, SE NE NE Section 13-3n-1w, total depth 1,433 ft., swabbed 15 bbl. of oil per hour, not completed.

In the Sandoval field in Marion County where a Devonian lime drilling campaign is still in progress, Menhall and others' No. 2 Goodwin, NW NW SE Section 8-2n-1e, swabbed 26 bbl. of oil and 128 bbl. of water at total depth of 2,981½ ft., testing. Big Four Oil & Gas Co.'s No. 1 Chaffin, NW cor. NE NW Section 9-2n-1e, is shut in at a total depth of 3,012 ft. Baldwin and others' No. 1 Schaffnit, SW cor. SE¼ Section 4-2n-1e, was still shut down for orders at 3,014 ft.

In Clinton County M. C. Trumbull and others were drilling at 85 ft. in No. 1 Peters, SW cor. SE SE Section 33-2n-4w. Snell and Goldschmidt's No. 1 Schaeffer, SW NE NW Section 33-2n-3w, total depth 1,381 ft., underreaming 8-in. casing. Same operators' No. 1 Ackman, SE SW SE Section 22-2n-3w, rigged up machine. J. B. Finley's No. 1 Heinzman, NE SE NW Section 16-2n-1w, derrick up.

In Clay County Wiser Oil Co.'s No. 1 Shannon, C W½ NE SW Section 25-2n-8e, pumped 122 bbl. in 10 hours, total depth 3,132 ft., testing.

In Wabash County Pollock's No. 1 Whiteside, NW NE NE Section 11-1n-12w, Bridgeport sand at 1,055-75 ft., with a showing of oil, fishing for casing, total depth 1,327 ft.

In Clinton County Paul Mosebach's No. 1 Robinson, SE SW SE Section 5-1n-3w, total depth 2,431 ft., flowing 50 bbl. per day through casing, preparing to rerun tubing and rods.

In Washington County Chicago Syndicate's No. 1 Illinois Central Railroad, SE NW SE Section 23-1s-1w, set 10-in. casing at 80 ft.

In Edwards County Anderson & Broadus' No. 1 Harms, SW NE SW Section 17-1s-14w, Cypress sand at 2,748 ft., drilling at 2,978 ft. C. A. Carter and others' No. 1 Steckler, NW NW NW Section 24-1s-13w, drill pipe stuck at 1,978 ft.

In Wayne County Caynua Oil Co.'s No. 1 Borah, C E½ SW NE Section 23-1s-8e, pumped 69 bbl. of oil and 35 bbl. of water in 24 hours; still testing. Oilwell Drilling Co.'s No. 1 Hilliard, C N½ NE NW Section 34-1s-7e, set 10-in. casing at 70 ft.

In Edwards County Whisnant and others' No. 1 Dunk, NE SE SE Section 36-2s-10e, drilling at 1,625 ft.

In Washington County Magnolia Petroleum Co.'s No. 1 Kosuszek, NW SE NW Section 26-3s-3w, shot with 3 qt. at 1,275-80 ft. and with 3 qt. at 2,265-71 ft., pumped 74 bbl. of oil and 5 bbl. of water in 18 hours; testing.

In Edwards County J. B. Barnes' No. 1 Baker, SW NW NW Section 18-3s-14w of second principal meridian, swabbed 200 bbl. of fluid per day, 3 per cent water at plugged back total depth of 3,107 ft.

In White County Schriver and others were drilling at 2,571 ft. in No. 1 Woodard, SW NE SE Section 20-3s-10e. Phillips Petroleum Co.'s No. 1 Garner, NE NE NE Section 36-4s-10e, pumped 33 bbl. of oil in 16 hours from pay between 2,952 ft. and 2,962 ft., total depth; testing.

In Hamilton County Texas Co. was testing at 3,381 ft. in No. 1 Barker, NW NW NE Section 20-3s-7e.

Eastern Fields

(Continued from Page 72)

2,416 ft., will be abandoned. There was about 55,000 ft. a day in the Big lime. In Union district Woodall Gas Co. deepened No. 2 R. L. Stowers to 3,872 ft., starting at 2,485 ft. It gaged 260,000 cu. ft. a day after the shot.

In Marion County Monroe & Laughlin deepened No. 1 O. N. Koen in Mannington district to 3,114 ft. and it gaged 59,000 cu. ft. a day.

In Putnam County Union Development Gas Co. completed a gas well on the John A. Wood farm in Curry district at 1,031 ft. with the Salt sand at 1,029-31 ft. It gaged 300,000 cu. ft. of gas at 1,029-30 ft. without a shot, with a rock pressure of 300 lb. in one-half hour. In this district Henderson Development & Gas Co. deepened No. 1 J. W. Nicholas from 2,289 ft. to 3,810 ft. with the Brown shale at 3,310-3,782 ft. It was dry in the Brown shale but has a volume of 31,400 cu. ft. a day in the Berea.

In Ritchie County Clem S. Morris completed No. 2 George Parks in Murphy district at 1,987 ft., Injun sand, and it gages 53,000 ft. a day after an 80-qt. shot. In this district Hope Natural Gas Co. drilled No. 6630 E. Bickerstaff deeper to 1,913 ft. It had a small oil showing in the Salt sand. In this district John R. Geho drilled the test on the Charles R. Swadley farm through the Injun sand to 2,048 ft. and it was dry and abandoned. Here Pittsburgh Oil & Gas Co. drilled No. 2 Coyle heirs through the Injun sand to 2,037 ft. and it was dry. In Union district Pittsburgh & West Virginia Gas Co. drilled No. 1 A. B. Summerville to 2,047 ft. and it is showing 80,000 cu. ft. a day from Injun sand.

In Wetzel County Hope Natural Gas Co. completed No. 7913 Virginia Blatt in Proctor district at 1,832 ft., with Pittsburgh Coal at 798 ft.; Maxton sand, 1,777-1,830 ft.; 1,000,000 cu. ft. of gas at 1,817-20 ft.

Oriskany Gas Field

Two gas wells were completed in the Oriskany gas field in Kanawha County. In Poca district Brawley-Reid Gas Co. completed the test on the Clate Fisher farm at 5,233 ft. with the Corniferous lime at 5,092 ft.; Oriskany, 5,217 ft., and a final gage of 5,955,000 ft. a day. In this district Columbian Carbon Co. completed No. 2 H. H. Parsons at 5,158 ft. with the Corniferous lime at 4,949 ft. and the Oriskany at 5,073 ft. The final gage was 232,000 cu. ft. a day. It may be shot.

Nineteen wells are still drilling in this field and it is the most densely drilled and greatest Oriskany field in the East.

Outside Deep Tests

In Jackson County Everett Starcher and others are drilling at 2,400 ft. on the Estell Boggess farm and rigged up on the W. L. Fisher farm, both in Ripley district. In Washington district Columbian Carbon Co. is down 1,575 ft. in No. 1 Putnam Co. and at 2,710 ft. in No. 1 Helen M. Hoge. United Fuel as Co. is drilling at 4,387 ft. in No. 4860 Monroe Jones and others.

East Texas Fields

(Continued from Page 81)

Gragg's No. 1 A. W. Johnson, S. Sanchez Survey, 5,232-71 ft., 115,000,000 cu. ft. of gas with 8 to 10 bbl. of distillate per day.

Limestone County

A wildcat, M. Samuel's No. 1 Barron, W. G. McKinzie Survey, 4 miles northwest of Thornton, perforated casing from 5,584 to 5,611 ft. in the Glen Rose and made 13,700,000 cu. ft. of gas with 5 to 8 bbl. of distillate per 1,000 cu. ft. of gas.

EAST TEXAS FIELD COMPLETIONS

(1-hour gages)

Gregg County—Longview Area

Roosth-Genecov's No. 6 G. W. Richey, 3,555-93 ft., 28 bbl., pumping. Stanolind-Tide Water's No. 18 O. J. Albright, 3,546-3,644 ft., 43 bbl. Petroleum Co.'s No. 14 L. M. Colburn, 3,575-3,641 ft., 60 bbl.

Gregg County—Kilgore Area

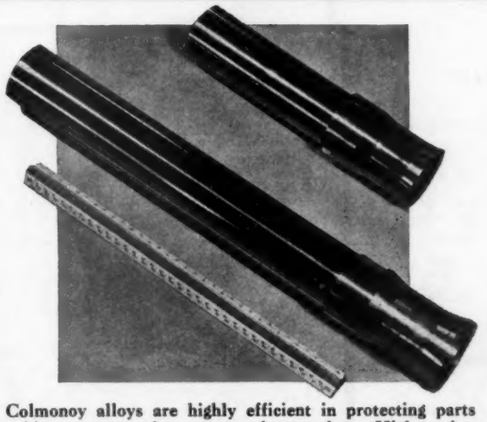
O. R. Cooper's No. 1 Colored Cemetery, 3,552-80 ft., 50 bbl. Overton Refining Co.'s No. 4-A I.&G.N.R.R. Survey, 3,544-62 ft., 17 bbl. N. P. Powell's No. 8 S. E. Sanders, 3,693-3,723 ft., 100 bbl.

Rusk County—Joiner Area

Hunt Oil Co.'s No. 23-B Bradford, 3,574-3,654 ft., 10 bbl. Hunt Oil Co.'s No. 22-D Bradford, 3,560-3,630 ft., 10 bbl. Hunt Oil Co.'s No. 24-D Bradford, 3,551-3,631 ft., 10 bbl. Hunt Oil Co.'s No. 25-D Bradford, 3,565-3,634 ft., 10 bbl.

Lloydminster Rate Agreement

LLOYDMINSTER, Sask. — The town council and Lloydminster Gas Co. have agreed on a new rate schedule under which domestic users of natural gas will receive 8 per cent prompt-payment discount in addition to the previous 5 per cent.



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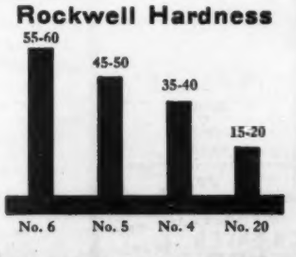

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COLMONOY

West, Central and Panhandle Texas

By
D. H. STORMONT

Widely Separated Wildcats Close to Interesting Depths

MIDLAND, Tex., Dec. 4.—Thirty-two locations were staked in West Texas in the past 7-day period, which is one less than in the previous week. Thirty-four oil wells were completed and five dry holes registered as against 38 oil wells and 2 dry holes in the week before. Three of the 32 locations were in wildcat territory, one each in Gaines, Irish, and Tom Green counties.

In the Permian-basin area interest centered on several widely separated wildcat tests which were either nearing the critical stage or in the process of starting. Crockett County's closely watched Ordovician wildcat continued to drill ahead, several important markers were topped favorably in Ector County's link test between the Foster and the North Cowden pools, while a new wildcat was staked in the south central part of Gaines county in the northern basin area.

On the large Todd ranch in Crockett County, 15 miles northwest of the town of Ozone, Continental Oil Co.'s No. 1 Todd, Ordovician wildcat in Section 30, Block W.X., G.C.&S.F. Survey, was preparing to core ahead below 6,485 ft. after recovering slight shows of oil in two cores from 6,382 to 6,411 ft. and from 6,412 to 6,418 ft. The test has cored dolomite in the Ellenburger formation at intervals for the past 100 ft.

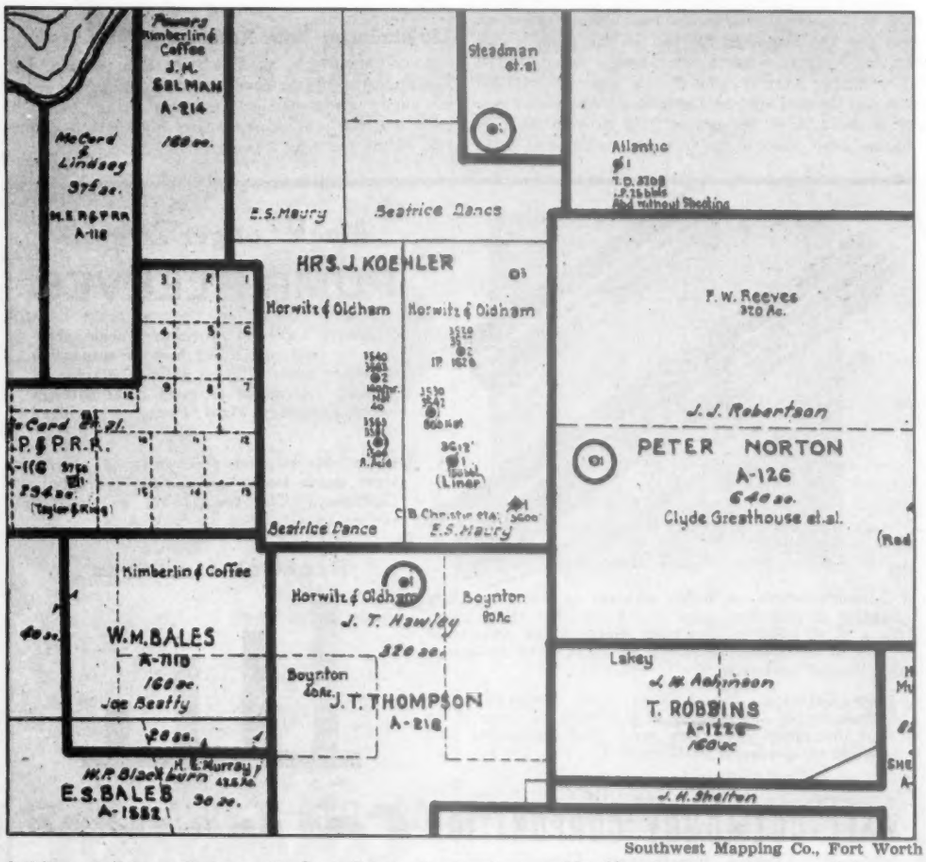
In central Ector County and centering increased attention is the Landreth Production Corp. and Shell Oil Co., Inc.'s No. 1-A J. L. Johnson, wildcat between the south ends of the Goldsmith and the North Cowden pools and just north of the northern end of the Foster and Harper pools. It is located 2,310 ft. from the north and west lines of Section 43, Block 43, T-1-S, T.&P. Survey, and slightly west of the two oil wells in the Johnson area just north of the Foster pool. The wildcat reported a top on the Yates sand at 2,800 ft., which places it about level with the dry and abandoned Cosden Petroleum Corp.'s No. 1 Johnson, 1¼ miles to the north and slightly east. The wildcat had been correlated 40 ft. higher than the Cosden dry hole on the top of the anhydrite. The top of the Yates sand in the wildcat places it about 80 ft. higher than the Cherry-Gholson's No. 1 Johnson, 1¾ miles to the southeast. No. 1 Johnsan had been 117 ft. higher on the top of the anhydrite than the Cherry-Gholson failure. At last reports the wildcat was drilling below 3,910 ft., with top of the brown lime reported at 3,850 ft., which places the test 37 ft. higher than the closest control point.

Continuing the activity in Pecos County's recently opened Apco (Ordovician) oil pool, Skelly Oil Co. made a location for No. 1 Masterson, 660 ft. from the southwest and 1,950 ft. from the northwest lines of Section 104, Block 10, H.&G.N. Survey. Two miles southwest of the pool, Olson Drilling Co. and Bryce McCandless' No. 1 Crockett, seeking Ordovician production, has drilled to 2,230 ft. in lime. Humble Oil & Refining Co.'s No. 1 Bertha Young, wildcat 8 miles northwest of the pool, seeking Ordovician production, has reached 2,150 ft. in lime.

North Basin Area

Gaines County centered the majority of the activity in the northern part of the Permian basin as a new wildcat was staked and new completions were in prospect in the recently opened Cedar Lake pool. The wildcat was Oil Well Drilling Co.'s No. 1 Sikes, 660 ft. from the south and east lines of Section 10, Block 25-A, P.S.L. Survey, in the south central part of the county. The test is on acreage farmed out by the Humble Oil & Refining Co. and is approximately 9 miles west of the discovery well in Gaines County and about 11 miles southwest of production on the southeast edge of the Seminole field. Cellar and pits are being dug and material is being moved to the location.

In the Cedar Lake pool of northeastern Gaines County, Stanolind Oil & Gas Co., discoverer of the field, has commenced testing at No. 1 American Warehouse, Section 5, D.&W. Survey, offset to the company's No. 1 J. B. Rayner, which opened the field. Two-inch tubing has been run to 4,737 ft. to test saturation logged from 4,624 to 4,734 ft. Seven-inch casing is cemented at 4,388 ft., total depth 4,740 ft. Initial acid treatment of 2,500 gal. was made and the well was last reported testing production, with no gages taken. The company's No. 1 T. S. Riley, Section 11, Block H, D.&W. Survey, 3½ miles northwest of the pool opener, was drilling below 4,450 ft. in anhydrite and reported checking slightly lower than the discovery well.



Southwest Mapping Co., Fort Worth

Stribling pool in northwestern Stephens County is attracting considerable attention as new completions are reported and new outposts are staked. New completion this week is the south outpost

WEST TEXAS FIELD COMPLETIONS

(24-hour gages)

Cochran County

A wildcat, Atlantic Refining Co.'s No. 1 Boyd, 4,990-5,040 ft., 840 bbl. A wildcat, Dean & Hyde's No. 1 Reed & Taylor, dry and abandoned at total depth of 5,107 ft.

Crane County

In the McCamey field Gilcrease Oil Co.'s No. 3 Anna Gibbs, 2,273-2,439 ft., 41 bbl., old well drilled deeper. Superior Oil Co.'s No. 4 Hughes, 2,265-2,490 ft., 31 bbl., old well drilled deeper. In the McElroy field Gulf Oil Corp.'s No. 45 McElroy, 2,750-2,970 ft., 222 bbl., old well drilled deeper.

Crosby County

A wildcat, Gulf Oil Corp.'s No. 1-C Swenson, dry and abandoned at total depth of 8,414 ft. with no markers given out by company.

Ector County

In the Foster pool Atlantic Refining Co.'s No. 4 Henderson, 4,000-4,200 ft., 955 bbl. Stanolind Oil & Gas Co.'s No. 31-A E. F. Cowden, 4,010-4,170 ft., 653 bbl. Stanolind's No. 34-A E. F. Cowden, 4,015-4,206 ft., 187 bbl. Stanolind's No. 36-A E. F. Cowden, 4,000-4,140 ft., 85 bbl. Stanolind's No. 12 Johnson, 4,090-4,200 ft., 264 bbl. Stanolind's No. 22 Witcher, 4,015-4,210 ft., 1,320 bbl. In the Jordan pool Kewanee Oil & Gas Co.'s No. 2-B University, 3,468-3,633 ft., 2,099 bbl. Cities Service Oil Co.'s No. 1-C University, 3,504-3,622 ft., 617 bbl. In the Goldsmith pool Gulf Oil Corp.'s No. 232 Goldsmith, 4,122-4,217 ft., 1,485 bbl. In the Johnson pool I. T. I. O. Co.'s No. 1-B Johnson, 4,100-85 ft., 797 bbl. In the North Cowden pool Stanolind Oil & Gas Co.'s No. 23 Roberts, 4,245-4,470 ft., 890 bbl.

Gaines County

In the Wasson-Bennett pool Continental Oil Co. and Amon G. Carter's No. 4-44 Moore-Langdon, 4,900-5,050 ft., 838 bbl.

Hockley County

In the Slaughter pool Stanolind Oil & Gas Co.'s No. 4-A Alex Slaughter, 4,945-5,040 ft., 662 bbl. Stanolind's No. 3-B Alex Slaughter, 4,950-5,040 ft., 883 bbl.

Howard County

In the Snyder pool Shasta Oil Co.'s No. 11 Texas Land & Mortgage Co., 2,695-2,832 ft., 814 bbl.

Pecos County

In the Taylor-Link pool Clark & Hudson's No. 2 University, 1,590-1,669 ft., 203 bbl. Sahara Oil Co.'s No. 6 Francis & Lewis, dry and abandoned at total depth of 1,890 ft.

Scurry County

In the Sharon pool Dobson & Robinson's No. 3 McClure, 2,237-2,450 ft., 138 bbl. Ordovician Oil Co.'s No. 4 Thompson, 2,231-2,440 ft., 129 bbl. J. B. Stoddard's No. 8 McClure, 2,246-2,446 ft., 211 bbl.

Ward County

In the Dobbs pool Texoil Production, Inc.'s No. 4 Allen, 1,975-2,095 ft., 169 bbl. Grisham-Delaney's No. 2 White, dry and abandoned at total depth of 2,218 ft. Stanolind Oil & Gas Co.'s No. 6 Brown, 2,282-2,400 ft., 23 bbl. Sahara Oil Co.'s No. 2 Dorr, abandoned location.

Winkler County

In the Halley pool Skelly Oil Co.'s No. 34 Halley, 2,665-2,800 ft., 1,279 bbl.

Yoakum County

In the Wasson-Bennett field Aloco Oil Co.'s No. 4 Hovencamp, junked and abandoned at total depth of 4,673 ft. Aloco Oil Co.'s No. 4 Keller, 4,868-5,157 ft., 178 bbl. Honolulu Oil Corp.'s No. 3-804 Carter-Wilder, 4,990-5,140 ft., 706 bbl. Mabee Oil & Gas Co.'s No. 12 Willard, 4,995-5,190 ft., 595 bbl. Magnolia Petroleum Co.'s No. 12 Willard, 4,995-5,190 ft., 593 bbl. Magnolia Petroleum Co.'s No. 4-867 Kendrick, 4,980-5,112 ft., 1,364 bbl. Phillips Petroleum Co.'s No. 2 Dowden, 4,944-5,138 ft., 494 bbl. Texas Pacific Coal & Oil Co.'s No. 25 Bennett, 5,042-5,223 ft., 508 bbl. Tide Water Associated Oil Co.'s No. 1-A R. M. Kendrick, 4,890-5,140 ft., 1,430 bbl.

WEST CENTRAL TEXAS

FORT WORTH, Tex., Dec. 4.—The Stribling pool of northwestern Stephens County, typical of West Central Texas' small and usually little known pools, is rapidly gaining prominence. The discoverers and main operators in the pool, Horowitz & Oldham, have completed five oil wells in the area, the latest being a several-location south extension. The pool centers in the B. Dance and the E. S. Maury tracts in the J. Koehler Survey, just south of the Clear Fork branch of the Brazos River and near the Throckmorton County line. Latest completion is their No. 1 J. T. Hawley, J. T. Thompson Survey, Abstract 216, two locations south of the nearest producer in the field. Pay was found in 33 ft. of lime drilled from 3,549 to 3,582 ft. The operators planned to complete the well over the week end. A half mile north of the field Steadman and others are shut down at 1,100 ft. at their test in the southwest corner of the W. E. Powers' 160 acres in the George H. York Survey. Quarter mile east of the field Clyde Greathouse and others have a location staked in the extreme northwest corner of the Peter Norton Survey, Abstract 126. Next operation in the pool will be the Horowitz & Oldham's No. 3 E. S. Maury, northeastern corner of the Maury tract, between the temporarily shutdown Steadman test and the pool proper.

The Bowles pool, on the Taylor and Callahan county line, one of the district's closely watched areas during the past few weeks, received several setbacks as three dry holes were registered. Defining the southeast limits of the pool, Gallagher & Lawson's No. 1 Thornton, extreme southeast corner of the S½ SW¼ of the A. Bates Survey, found some 20 ft. of dry Cook sand at the 1,735-ft. pay level of the field and was being drilled several hundred feet deeper in search of another pay section before being abandoned. The remaining two failures were in the northern part of the field. Two locations north of the recently completed large producer by S. B. Roberts on the Mitchell tract, Ungren & Frazier's No. 1 Willie Moore, SW cor. NE¼ Section 28, B.A.L. Survey, was dry and abandoned at 1,959 ft. after finding only a small show of oil in the field's 1,735-ft. pay zone. Just northwest of this dry hole, Joe Evans' No. 1 Shepperd was drilling ahead below 1,800 ft. after drilling approximately 33 ft. of dry Cook sand. It is 150 ft. north of the south line of the SW¼ of Section 18, B.A.L. Survey. Half mile due north of the No. 1 Shepperd failure, Joe Evans' No. 1 Gist, SW cor. SE¼ NW¼ Section 18, is nearing the top of the pay horizon, drilling at 1,700 ft. A fishing job which delayed the test for several weeks at a depth of 1,580 ft. was cleaned up early in the week. This outpost, since being started several weeks ago, has been separated from the field by the two recent failures.

Centering the attention in Coleman County was the completion of a 1-mile northeast extension to the Novice pool. The new well is States Oil Corp. and H. O. Wooten's No. 1 J. P. Morris, on the large Morris ranch, which has several scattered oil and gas producers. The No. 1 Morris topped the Gardner sand at 3,574 ft. and cored to 3,601 ft., the well being bottomed at 3,602 ft. in shale. A 40-qt. shot was given the pay section after which the well kicked off to flow 150 bbl. of oil in the first 2 hours. Location is 2,240 ft. from the south and 330 ft. from the east lines of the J. P. Stone Survey No. 6, about a mile northwest of the town of Novice.

WEST CENTRAL TEXAS COMPLETIONS

Brown County

Jameson-Pollard's No. 1-A Willis, 1,264-79 ft., 20 bbl. Plains Production Co.'s No. 1 George, dry and abandoned at total depth of 1,366 ft.

Coleman County

Anzac Oil Corp.'s No. 1-F Morris, 2,171-87 ft., 200 bbl. Banner's No. 1 Powell, dry and abandoned at total depth of 1,350 ft.

Eastland County

Pepper & Godwin's No. 1 Rush, junked and abandoned at total depth of 395 ft.

Comanche County

Gallagher & Lawson's No. 1 Johnson, dry and abandoned at total depth of 708 ft. J. H. and J. P. Whitesides' No. 3 Anderson, 589-99 ft., 10 bbl.

Erath County

Chandler's No. 1 Chandler, dry and abandoned at

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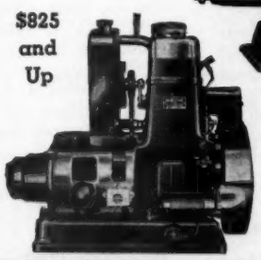

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total depth of 5,126 ft. after topping Mississippian at 5,057 ft. and Ellenburger at 5,063 ft.

Callahan County

Green & Owens' No. 5 Anthony, dry and abandoned at total depth of 550 ft. K. J. Houston's No. 1 fee, 274-82 ft., 5 bbl. E. Johnson's No. 4 Higgins, dry and abandoned at total depth of 449 ft.

Jones County

Condor Petroleum Co.'s No. 25 Sayles, 1,950-70 ft., 296 bbl. Hammond, Inc.'s No. 1 Rial, dry and abandoned at total depth of 3,296 ft. Hammond, Inc.'s No. 2 Rial, abandoned location. Humble Oil & Refining Co.'s No. 18 Hollums, 3,214-20 ft., 474 bbl. in 6 hours. Lewis Production Co.'s No. 16 Sayles, 1,971-80 ft., 250 bbl. W. H. Peckham's No. 8 Brock, 1,897-1,900 ft., 314 bbl. Roberts Co.'s No. 1 Jefferies, junked and abandoned at total depth of 1,505 ft. Sandy Ridge Oil Co.'s No. 11 Steffens, 1,906-12 ft., 254 bbl. States Oil Corp.'s No. 1 Riddle, dry and abandoned at total depth of 2,012 ft. Wichita Production Co.'s No. 3 Daughtry, 1,887-99 ft., 350 bbl.

Shackelford County

Fain-McGaha Oil Corp.'s No. 1 Morris, 1,504-07 ft., 40 bbl. J. L. Hart's No. 2 Sanders, 578-90 ft., 10 bbl. Roeser-Pendleton and Continental Oil Co.'s No. 4-A-89 Cook, dry and abandoned at total depth of 1,509 ft. Schuster's No. 1 DeWitt, temporarily abandoned at total depth of 3,040 ft. Sussex Oil Corp.'s No. 1 Dawson-Conway, dry and abandoned at total depth of 1,631 ft.

Stephens County

Shaw, trustee's No. 1 Stroud, 2,594-2,602 ft., 140 bbl.

Taylor County

Bradford & Robertson's No. 2 Reeves, 1,728-39 ft., 155 bbl.

PANHANDLE FIELD COMPLETIONS

(24-hour gages)

Carson County

Magnolia Petroleum Co.'s No. 65 fee No. 244, 3,050-3,104 ft., 514 bbl.

Gray County

Devore & Robinson's No. 1 William Jackson, dry and abandoned at total depth of 3,300 ft. Gulf Oil Corp.'s No. 2 Merton, 3,190-3,280 ft., 378 bbl. Humble Oil & Refining Co.'s No. 11 Merton, 3,134-3,258 ft., 465 bbl. Stanolind Oil & Gas Co.'s No. 6 T. B. Cobb, 3,292-3,327 ft., 169 bbl. Stanolind Oil & Gas Co.'s No. 6 J. A. Hood, 3,017-3,106 ft., 483 bbl. Stanolind Oil & Gas Co.'s No. 11 Merton, 3,206-97 ft., 164 bbl.

Hutchinson County

J. E. Crosby, Inc.'s No. 33 W. Pitts, 2,875-2,945 ft., 475 bbl. Continental Oil Co.'s No. 1 H. W. Carver, 2,925-3,175 ft., 6,000,000 cu. ft. of gas. Kewanee Oil Co.'s No. 40 T. D. Lewis, 2,875-2,993 ft., 425 bbl. Phillips Petroleum Co.'s No. 11 Gary, 3,176-3,287 ft., 162 bbl. Texilvania Oil Co.'s No. 9 Harvey Sisters, 2,963-3,032 ft., 367 bbl. Smith Brothers Refining Co.'s No. 5 J. T. Hodges, 2,979-3,064 ft., 303 bbl. Stanolind Oil & Gas Co.'s No. 15 W. B. Haile B, 2,965-3,098 ft., 350 bbl.

Moore County

Texoma Natural Gas Co.'s No. 1-E LaSalle National Bank, 3,065-3,412 ft., 11,878,000 cu. ft. of gas. Panhandle Eastern Pipe Line Co.'s No. 1-37 J. T. Sneed, 2,590-3,018 ft., 37,423,000 cu. ft. of gas.

Wheeler County

Magnolia Petroleum Co.'s No. 5 J. A. Worley, 2,397-2,406 ft., 167 bbl. Superior Oil Corp.'s No. 1 P. W. Krey, dry and abandoned at total depth of 2,285 ft.

California Oil Field Operations For October, 1939

According to figures collected by the American Petroleum Institute, the total production of crude oil in California for October amounted to 19,098,804 bbl., an average of 616,091 bbl. per day. This is an increase of 660 bbl. per day over September production.

Total stocks of crude and all products in Pacific Coast territory decreased during the month 1,398,276 bbl. The total stocks at the end of the month were 153,260,533 bbl. The total stock decrease for 1939, up to October 31, was 4,423,756 bbl.

Sixty-seven wells were completed during the month with an initial daily production of 56,581 bbl., compared with 72 wells completed during September, with an initial production of 49,726 bbl.

CRUDE PETROLEUM PRODUCTION

(Figures of production and stocks are in barrels of 42 gallons)

	Total production	Daily average		
	October	Oct. 1939	Sept. 1939	Oct. 1938
Group No. 1—				
Arvin	63,754	2,056	2,163	
Belridge—North	367,767	11,864	11,816	12,698
Belridge—South	36,037	1,163	1,134	1,097
Canal	181,488	5,854	5,659	3,355
Canfield Ranch	2,657	86	80	94
Coalinga	644,950	20,805	20,486	8,921
Cole's Levee	50,553	1,631	1,739	
Edison	69,556	2,244	2,133	2,669
Elk Hills	314,801	10,155	10,350	10,290
Fruitvale	189,573	6,115	6,304	7,746
Greeley	80,933	2,611	2,298	2,836
Kern River	355,335	11,462	11,958	11,499
Kettleman Middle dome	75	2	28	36
Kettleman North dome	1,613,294	52,042	52,263	62,183
Lost Hills	110,739	3,572	3,572	3,355
McKittrick	112,485	3,629	3,707	3,142
Midway-Sunset	1,508,246	48,653	49,039	56,382
Mountain View	237,376	7,657	7,915	9,223
Mount Poso	336,843	10,866	10,976	14,931
Paloma	6,847	221	166	
Rio Bravo	243,151	7,844	7,659	7,598
Round Mountain	249,247	8,040	8,509	13,031
Strand	22,542	727	657	
Ten Section	265,406	8,561	9,048	8,531
Tupman	18,459	596	583	
Wasco	41,398	1,335	1,526	377
Wheeler Ridge	10,288	332	330	306
Group No. 2—				
Capitan	69,123	2,230	2,230	2,977
Elwood	127,788	4,122	4,120	5,126
Rincon	115,832	3,737	3,487	3,423
San Miguelito	86,833	2,801	2,872	2,818
Santa Barbara	9,259	299	274	385
Santa Maria	549,270	17,718	18,602	18,400
Summerland	738	24	22	46
Ventura Avenue	1,128,162	36,392	34,957	34,332
Ventura-Newhall	219,950	7,095	6,877	5,499
Watsonville	390	30	30	30
Group No. 3—				
Brea-Olinda	179,492	5,790	5,722	5,705
Coyote—East	80,178	2,586	2,626	3,256
Coyote—West	311,196	10,038	9,311	7,999
Dominguez	570,278	18,396	18,150	26,061
El Segundo	89,932	2,901	2,912	5,882
Huntington Beach	830,852	26,802	26,229	31,600
Inglewood	403,236	13,008	12,427	13,499
Lawndale	1,477	48	33	70
Long Beach	1,399,340	45,140	44,976	54,548
Los Angeles-Salt Lake	16,324	527	541	573
Montebello	807,469	26,047	25,726	14,116
Playa Del Rey	141,970	4,580	4,680	5,934
Potrero	37,844	1,221	1,214	600
Richfield	268,770	8,670	8,723	8,729
Rosecrans	329,553	10,631	10,409	14,016
Santa Fe Springs	825,419	26,626	27,020	30,283
Seal Beach	221,470	7,144	7,105	8,051
Torrance	440,790	14,219	15,079	19,990
Whittier	30,267	976	895	912
Wilmington	2,671,262	86,170	86,084	93,652
Total October	19,098,804	616,091	615,431	658,817
Total September	18,462,923	615,431		
Increase	635,881	660		

OIL FIELD DEVELOPMENT

	New rigs up	Active drilling	Producers completed	Daily initial output	Active producing	Abd. wells—Drillers	Abd. wells—Producers
Group No. 1—							
Arvin	1	2	2	1,206	11	0	0
Belridge—North	1	1	2	2,388	74	0	0
Belridge—South	0	0	0	0	83	0	0
Canal	1	2	1	536	28	0	0
Canfield Ranch	0	0	0	0	1	0	0
Coalinga	8	19	3	5,359	883	1	2
Cole's Levee	5	10	1	650	8	0	0
Edison	1	1	0	0	88	0	0
Elk Hills	0	0	0	0	170	0	0
Fruitvale	2	3	0	0	173	0	0
Greeley	0	5	0	0	22	0	0
Kern River	6	6	5	32	1,541	1	1
Kettleman Middle dome	0	0	0	0	3	0	0
Kettleman North dome	1	18	4	8,754	228	0	1
Lost Hills	0	0	0	0	287	0	0
McKittrick	2	1	0	0	203	0	0
Midway-Sunset	4	5	0	0	2,564	0	3
Mountain View	1	2	3	815	270	0	1
Mount Poso	4	2	3	185	270	0	1
Paloma	0	2	0	0	1	0	0
Rio Bravo	2	3	0	0	34	1	0
Round Mountain	0	1	1	50	205	0	0
Strand	1	1	2	5,357	5	0	0
Ten Section	2	1	1	2,822	28	0	0
Tupman	0	2	0	0	3	0	0
Wasco	2	1	0	0	7	0	0
Wheeler Ridge	0	0	0	0	33	0	0
Group No. 2—							
Capitan	0	0	0	0	44	0	0
Elwood	0	0	0	0	80	0	0
Rincon	0	1	1	299	54	0	0
San Miguelito	1	2	0	0	20	1	1
Santa Barbara	1	0	1	50	27	0	0
Santa Maria	3	3	2	7,305	272	0	0
Summerland	0	0	0	0	17	0	0
Ventura Avenue	3	15	2	2,127	254	0	0
Ventura-Newhall	1	7	1	870	557	0	0
Watsonville	0	0	0	0	7	0	0
Group No. 3—							
Brea-Olinda	0	0	0	0	352	0	0
Coyote—East	0	1	1	125	77	0	0
Coyote—West	0	0	0	0	71	0	0
Dominguez	1	2	1	1,656	167	0	0
El Segundo	0	0	0	0	47	0	2
Huntington Beach	2	6	1	687	532	0	0
Inglewood	0	0	0	0	222	0	0
Lawndale	0	0	0	0	5	0	0
Long Beach	2	5	1	180	1,202	0	6
Los Angeles-Salt Lake	0	0	0	0	111	0	0
Montebello	13	39	15	8,858	300	0	1
Newport	0	0	0	0	0	1	0
Playa Del Rey	0	0	0	0	165	0	0
Potrero	0	0	0	0	16	0	0
Richfield	0	0	0	0	298	0	0
Rosecrans	3	3	1	383	136	0	0
Santa Fe Springs	0	0	0	0	573	0	4
Seal Beach	0	0	0	0	114	0	0
Torrance	0	2	0	0	697	0	5
Whittier	0	0	0	5	145	0	0
Wilmington	16	13	13	6,072	731	0	0
Miscellaneous drilling	4	28	0	0	0	5	0
Group No. 4—gas fields—							
Buena Vista Lake	0	0	0	0	1	0	0
Buttonwillow	0	0	0	0	22	0	0
Chowchilla	0	0	0	0	0	0	0
Delano	1	0	1	gas	2	0	0
Dudley Ridge	0	0	0	0	0	0	0
Fairfield Knolls	0	0	1	gas	0	0	0
Goleta	1	0	0	0	0	0	0
Marysville Buttes	0	1	0	0	3	0	0
McDonald Island	0	0	0	0	4	0	0
Rio Vista	1	0	0	0	22	0	0
Semi-Tropic	0	0	0	0	2	0	0
Tracy	0	0	0	0	4	0	0
Total October	97	216	67	56,581	14,491	10	27
Total September	92	195	72	49,726	14,417	16	15
Increase (*Decrease)	5	21	*5	6,855	74	*6	12

STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES

	Oct. 31, 1939	Sept. 30, 1939	October change	Dec. 31, 1938 (reclassified)
1 Gasoline-bearing crude	35,413,929	37,115,203	—1,701,274	36,225,312
2 Non-gasoline-bearing crude	14,065,553	14,074,602	—9,049	16,282,177
3 Unblended natural gasoline	1,889,973	2,049,211	—159,238	2,699,455
4 Gasoline (not including distributing and service stations)	14,338,180	13,454,290	+883,890	13,259,369
5 Naphtha distillates	*1,263,943	*1,487,704	—223,761	*1,566,349
6 Gas oil and diesel oil	9,974,159	9,979,845	—5,686	10,539,937
7 Fuel-oil residuum	68,655,549	68,850,703	—195,154	70,957,881
8 All other stocks	†7,659,247	†7,647,251	+11,996	†6,153,809
Total	153,260,533	154,658,809	—1,398,276	157,684,289
*Estimated amount of unfinished gasoline contained in item No. 5	1,018,615	1,176,350		1,350,379
†Coke included in item No. 8	730,298	597,023		92,066

Michigan Field Report

By
O. C. PRESSPRICH

Pure Gets 2,500-bbl. Well in Center of Redding Pool

SAGINAW, Mich., Dec. 4.—Completion of a well with potential of 2,500 bbl. a day, naturally, in the heart of Clare County's Redding production featured the past week's activity in Michigan oil fields. The well, a Pure Oil Co. development, was the best in the state in several weeks. The week brought 17 producers, most of them in the southwestern area, their total potential output amounting to 8,000 bbl. a day. Thirteen tests were abandoned as dry holes, one small natural-gas well was completed and the location for one oil test was abandoned. Three of the 10 Kent County completions rated 1,000 bbl. a day or better.

The big Redding well is Pure's No. 4 Davis, in Section 33. Completion depth was 3,908 ft. In the field's southwest corner Talbot Oil Co. completed No. 1-C State-Redding, in Section 33, for 50 bbl. a day, naturally. A semiwildcat, H. W. Peltier's No. 1 Myers, Section 22, a mile north of production, renewed drilling operations after a shutdown near the Monroe top.

Somewhat greater activity was indicated in north-central areas as one producer-completion was recorded in Midland County, a new wildcat test got under way, and two other projects were making progress. The completion, Pure Oil Co.'s No. 27 Narmore, in Section 15 of Porter Township, was rated good for 384 bbl. a day after treatment with 500 gal. of acid. The well was completed at 3,392 ft. in Dundee limestone, and is located on the north edge of the once prolific Porter field. Meanwhile Sun Oil Co. was spudding in its No. 1 Davis wildcat in Section 13 of Edenville Township, about 2 miles north and east of the Edenville pool. No. 6 Carter Lease, Inc., a deep test in Section 18 of Porter, was below 3,900 ft., drillers anticipating that the Sylvania limestone objective was within 100 ft.

While several tests were active in Isabella County, the only completion was Rowmor Corp.'s No. 1 Slocum in Section 28 of Wise Township. There was a small amount of oil, but excessive water also was encountered and operators decided to abandon the test. Cities Service Co.'s No. 1 Tice, Section 29, and Gulf Refining Co.'s No. 1 Reed, in Section 16, were drilling at around 3,200 ft.

While there were three small producer-completions and three tests abandoned in Allegan County and two other failures in Van Buren County, the Walker-Wyoming field in Kent County continued to get big play, although indications were that the field is nearing its peak. A number of recent completions it was said, have been falling off sharply after their initial flush production. Best of the new wells in Walker are Edward B. Strom's No. 4 Park in Section 30 and Basin Oil and Gordon Oil Co.'s No. 4 Willdeboer, Section 31, both rating 1,440 bbl. initial a day after acid treatment. In Section 29 Eastern Petroleum Co. completed No. 1 Taalman for 1,000 bbl. a day, naturally. Other Walker wells ranged from 32 to 400 bbl. Sun Oil Co.'s No. 1 Post, a wildcat test in Gaines Township, was abandoned as a dry hole and in Section 33 of Walker D. E. Foster's No. 2 Nordon also was a failure. In Wyoming Township Twin Drilling Co.'s No. 1 Grand Rapids Gravel and Crown Development Co.'s No. 1 Rogers were failures, while Whitney & Folsom abandoned location for a scheduled test in Section 23.

The three Allegan producers, the best being rated at 60 bbl. a day, are in the new Salem pool. The failures were in Monterey and Overisel townships. Transwestern Oil Co.'s No. 1 Stager in Section 34 of Irving Township, Barry County, was another wildcat failure, the test being abandoned at 1,990 ft.

Otherwise there was little activity elsewhere in the Southwest, although interest centered on the possibilities of a wildcat test in Cass County. Silver Creek Oil Co.'s No. 1 Flint in Silver Creek Township was said to be producing more than 10 bbl. a day after acid treatment. It appears the test may be turned into the shallowest producer in the state, its depth being around 830 ft. in Traverse limestone.

Lentz & Miller's No. 1 Guerne in Egleston Township, Muskegon County, was a wildcat failure and the C. W. Teater No. 1 Howard wildcat in Section 27 of Crystal, Oceana County, was abandoned as a dry hole at 2,164 ft.

Only 22 drilling permits were issued by the state Conservation Department last week for locations in 11 counties, including four in Tallmadge of Ottawa. In an effort to stimulate wildcatting the state was offering at auction today and Tuesday leases on nearly 80,000 acres. The summary of last week's completions:

Allegan County

Monterey Township (3n-13w) — Muskegon Development Co. abandoned No. 1 Ward Granger, C W½ SE NE Section 27, as a dry hole at a total depth of 1,812 ft.

Overisel Township (4n-14w)—Jacob Bolema's No. 1 Edward Buscher, SW SE SE Section 27, was dry and abandoned at 1,619 ft. Twin Drilling Co.'s No. 1 Redder, SE SW NE Section 10, also was dry, being abandoned at 1,575 ft.

Salem Township (4n-13w)—Socony Vacuum Oil Co.'s No. 2 Fred Wiest, SW SW NE Section 2, rated 41 bbl. a day after acid treatment, completion depth being 1,790 ft. Vic R. Wilson's No. 1 Mathias Steffes, SE NW SE Section 2, completed at a depth of 1,679½ ft., produced 60 bbl. a day after being acid treated. Socony-Vacuum Oil Co.'s No. 2 J. Heibel and others, SW NE SE Section 2, was good for 20 bbl. a day after acidizing, total depth of the well being 1,680 ft.

Arenac County

Clayton Township (20n-4e) — Don Rayburn's No. 1 Hobart, C NE NE Section 9, completed at 2,624 ft., was acid treated to bring production to 66 bbl. a day.

Barry County

Irving Township (4n-9w) — Transwestern Oil Co. completed No. 1 Walter Stager, NW NW NE Section 34, as a dry hole at 1,990 ft.

Clare County

Redding Township (19n-6w)—Talbot Oil Co.'s No. 1-C State-Redding, NE NE SE Section 32, rated 50 bbl. a day naturally, having total depth of 3,907½ ft. Pure Oil Co.'s No. 4 Floyd E. Davis, C S½ SE NE Section 33, best Michigan completion in several weeks, had potential natural production at the rate of 2,500 bbl. a day, being completed at a depth of 3,908 ft.

Isabella County

Wise Township (16n-3w)—Rowmor Corp.'s No. 1 Albert Slocum, SE SE NW Section 10, was dry and abandoned at 3,718 ft.

Kent County

Gaines Township (5n-11w)—Sun Oil Co.'s No. 1 John G. Post, SE SE NW Section 10, a wildcat test, was unsuccessful and abandoned at a depth of 2,250 ft.

Walker Township (7n-12w)—Eastern Petroleum Co.'s No. 4 Taalman, NE NW SW Section 29, had initial natural potential of 1,000 bbl. a day, depth being 1,897 ft. Fisher-McCall Oil & Gas Corp. and others' No. 1 W. E. Sackner, SE SW NE Section 29, rated 32 bbl. a day after acid treatment, being completed at 1,926 ft. American Drilling Co.'s No. 1 Goudzwaard-Keeler, SW SW NW Section 29, total depth 1,894 ft., was good for 400 bbl. a day, naturally. Western Oil & Gas Co.'s No. 1 A. J. and J. Kalawart, SW SW SE Section 29, did 100 bbl. a day, naturally, at 1,870 ft. Two hundred barrels a day after acid treatment was initial production from C. E. Weller's No. 3-A Frank D. McKay, C N½ SE NW Section 30, at 1,923 ft. Edward B. Strom's No. 4 Park Association, NW SW NW Section 30, acid treated, had daily potential of 1,440 bbl. initially, completion depth being 1,915 ft. Texagon Oil Co.'s No. 1 Howard, NE NW NW Section 31, produced initially at the rate of 50 bbl. a day from a depth of 1,857 ft. Basin Oil and Gordon Oil Co.'s No. 4 R. Willdeboer, SW NE NW Section 31, completed at 1,867 ft., was good initially for 1,440 bbl. a day after being acidized. D. E. Foster's No. 2 Nordin, SE SW SE Section 33, did 160 bbl. a day after acid treatment, being completed at 1,753 ft. R. E. King's No. 1 John Haggerty, SW NW NW Section 33, was rated at 120 bbl. a day, after being acidized, its depth being 1,895 ft.

Walker Township (6n-12w)—Smith Petroleum Co.'s No. 1 Amanda Thomasma, NE NW NE Section 4, completed at 1,777 ft., rated 100 bbl. a day after acid treatment.

Wyoming Township (6n-12w) — Twin Drilling Co.'s No. 1 Grand Rapids Gravel Co., SW SE NE Section 3, was abandoned as a dry hole at 1,840 ft. Crown Development Co.'s No. 1 E. M. Rogers estate, C S½ SE NE Section 14, also was a failure, being abandoned at a depth of 1,894 ft. Al Whitney and J. P. Folsom abandoned location for No. 1 Arthur L. King, NE SE SE Section 23.

Midland County

Porter Township (13n-1w) — Pure Oil Co.'s No. 27 Nina B. Narmore, NW SW NW Section 15, was good for 383 bbl. a day after being acidized. Depth of the well is 3,392 ft.

Montcalm County

Reynolds Township (12n-10w)—Taggart Bros., Inc., completed No. 14 Hansen and others, C SE¼ Section 1, was a natural-gas well producing at the daily rate of 613,000 cu. ft. depth is 1,129½ ft.

Muskegon County

Egleston Township (10n-15w)—Lentz & Miller, Inc.'s No. 1 A. Guerne, NW NW NW Section 28, was dry and abandoned at 1,175 ft.

Oceana County

Crystal Township (16n-16w) — C. W. Teater abandoned No. 1 Alta Howard wildcat, C N½ SE NE Section 27, at 2,164 ft.

Van Buren County

Bloomingdale Township (1s-14w) — Alfred G. Morency's No. 1 Alice Carey, NW SW SW Section 7, was dry and abandoned at 1,199 ft.

Columbia Township (1s-15w)—Universal Gas & Oil Corp.'s No. 2 H. and G. Poth, NW NE NW Section 13, a dry hole, was abandoned at 1,245 ft.

Exposition Committees Are Being Appointed

Special meetings and entertainment will be provided for members of the various divisions of the oil industry at the May 1940 International Petroleum Exposition in Tulsa with days designated for each group, according to President W. G. Skelly.

Committee personnel is being appointed to handle advance plans, with committee headings including exploration, production, pipe lines, refining, natural gasoline, drilling contractors, safety, purchasing agents,

marketing, old timers, young oil executives, international delegates, and petroleum-engineering students.

Greece, Turkey, Canada, Germany, Venezuela, Mexico and Italy—seven foreign countries—have already sent in hotel reservations. Because of these record advance notifications and unusual international interest in the show this year, the exposition is dividing the international delegates committee into three groups.

The local division will be headed by James H. Gardner, president, Gardner Petroleum Co., Tulsa. A foreign attendance committee will be under the chairmanship of Barton A. Myers, director, International Petroleum Co., Ltd., Toronto, Canada. Entertainment plans for the foreign delegates will be under the direction of the Nomads club, an organization of oil-field supply men who travel extensively in foreign countries in carrying on their businesses.

Other committee chairmen who have already been appointed include H. M. Stalcup, vice president in charge of production, Skelly Oil Co., production committee; H. M. Cosgrove, executive secretary, Purchasing Agents Association, Tulsa, purchasing agents committee; Embye Kaye, manager of recycling operations, Tide Water Associated Oil Co., Tulsa, refinery committee; H. W. Boggess, superintendent of safety, Sinclair Oil companies, safety committee; J. A. La Fortune, vice president, Warren Petroleum Co., Tulsa, natural gasoline committee; Dr. Gustav Egloff, director of research, Universal Oil Products Co., Chicago, and Dr. C. K. Francis, technical editor, The Oil and Gas Journal, scientific and technical committee; and R. W. McDowell, vice president in charge of sales, Mid-Continent Petroleum Corp., Tulsa, marketing committee

New Method of Determining California Potentials

LOS ANGELES, Calif, Dec. 4.—Newly evolved technical methods to gage accurately oil-well capacities are to be applied in California and waste in field operations will be substantially reduced as a result. These new methods for potential determination have been under study by the Central Committee of California Oil Producers for 3 months and have been given their approval. This represents a further step in the direction of uniformity under the state's present self-managed curtailment program.

The new method embraces a technical study of subsurface pressure data, evaluation of which provides for the finding of a well's productive capacity, eliminating the necessity for wide-open flow demonstrations over long periods. This minimizes the piling up of excess oil, reduces subsurface waste and contributes to the conservation of reservoir energy.

Bottom-hole pressure measurements are made with a depth-pressure recording instrument run into the well or by use of a fluid-level finding device. Pressures are taken at several rates of production as well as under shut-in conditions. From these data an index of the well's productivity is determined and the potential arrived at.

In adopting this uniform method the Central Committee has taken a further step in establishing accurate potentials and an equitable distribution of the state's production. It will be recalled that a uniform formula for allocating the state quota to all wells was adopted in June. While it is not contemplated that the method will be used on all wells in the state, it will have the effect of properly evaluating the capabilities of properties in competitive flush areas.

Many of the larger companies will submit data already accumulated on their properties to the oil umpire and will continue to examine those wells not yet studied. Smaller companies are expected to avail themselves of facilities offered by engineering service concerns.

Canadian Fields

(Continued from Page 74)

20-4w5, is in the lower Blairmore formation below 5,555 ft. and logging satisfactorily.

In Section 34-20-3w5, Alberta Oil Incomes' No. 1, LSD 4, is in the lower Benton below 1,875 ft.

In the Whiskey Creek area, Mar Jon Oil Co.'s No. 5, LSD 1, Section 5-22-4w5, is standing at 2,160 ft., waiting for fuel.

New Tests Planned

With 18 Turner Valley tests actively drilling, preparations are being made to start or resume work on 16 additional locations. There is now comparatively little new drilling in the southwest area, the activity having shifted to the West Central and North Turner Valley sections.

In the southwest the westerly limits of the field have been pretty well defined by Okalta Oil Co.'s No. 6 and Scottish Petroleums' No. 1, both of which struck water in the main producing horizon of the lower lime. To the south, faulting has appearently delimited the field. The most important test now active in this area is Northwest-Hudson's Bay Co.'s No. 2, now in the lime. New drilling planned for this southwestern area includes Northwest-Hudson's Bay Co.'s No. 3, LSD 15, Section 8-18-2w5, immediately west of No. 1 producer, which has derrick up. In Section 29-18-2w5, Commoil's No. 3 has been spotted on the former Alco lease in LSD 13. In Section 32-18-2w5, Vantage Oils' No. 1, LSD 12, will be completed from 1,706 ft. as Royal Canadian Oil Co.'s No. 4. Pacific Petroleums' No. 4, LSD 3, same section, is dismantling derrick for its No. 5 test in the West Central area, but No. 4 will be drilled later.

In the West Central area, Davolite's No. 1, LSD 10, Section 18-19-2w5, standing at 1,830 ft., will be completed as Davies Petroleums' No. 5, resuming this month. Alliance Royalties' No. 1, sponsored by F. P. Byrne and associates, has derrick up in LSD 9, Section 13-19-3w5. Sunray Petroleum Corp.'s No. 1, LSD 8, same section, will be completed from 2,918 ft.

In Section 7-19-2w5, Anglo-Canadian Oil Co.'s No. 8 will drill in LSD 14, just north of No. 8 producer. Pacific Petroleums' No. 5 is working on derrick in LSD 6, and Royalite Oil Co.'s No. 48 has been spotted in LSD 10.

Farther north, in Section 18-19-2w5, Calmont-Northwest's No. 1 has derrick up in LSD 3, just north of Anglo-Canadian's No. 9. In Section 24-19-3w5, Lethbridge Petroleums' acreage in LSD 8 will be drilled by another company.

In North Turner Valley, Royalite Oil Co.'s No. 7 has been spotted in LSD 15 and Anglo-Phillips' No. 2 in LSD 13. In Section 27-29-3w5, Foothills Oil & Gas Co.'s No. 5 has been located in LSD 12 and No. 6 in LSD 5. In the north end, Alberta Oil Income's No. 2 has location in LSD 4, Section 4-21-3w5 and will probably spud this month.

Okalta Oil Co. of Calgary is planning to start two tests on its holdings in the West Central area, as soon as No. 7, now in the lime, is completed.

Tests in the Foothills

On the Clearwater structure, in the foothills north of Calgary, Altoba's No. 1, Section 31-34-9w5, bottoming at 3,060 ft., got a small flow of crude at 1,200 ft. and a gas flow, estimated at 6,000,000 cu. ft. a day, at about 2,400 ft. It is standing at 3,050 ft., 2,800 ft. in the Devonian and blowing considerable gas. The company has taken up additional acreage and may drill a second test.

On the adjacent Ram River structure, Ram River Oils' No. 2 has been spotted about midday between No. 1, in Township 38-12w5, and Altoba's No. 1 on the Clearwater structure. Location, on the south side of Prairie Creek, and on the west fold of the structure, was made by Russell V. Johnson, geologist for the company. Diamond drilling and camp equipment is being moved to location.

On the Grease Creek structure, Grease Creek-Northwest Co.'s No. 1, LSD 2, Section 13-29-7w5, is in the lower Blairmore formation below 5,615 ft.

On the Kootenay dome, west of Calgary, Roxana Petroleums' No. 1, Section 8-24-7w5, is in a hard formation of the Devonian lime below 5,848 ft.

On the Jumping Pound structure, Brown Consolidated's No. 1, LSD 3, Section 36-24-5w5, has resumed from 6,630 ft. after sidetracking lost pipe and setting casing on bottom. The well entered the Dalhousie formation at 6,285 ft. and the brown sand in the Kootenay at 6,450 ft., and the Madison is expected around 6,750 ft.

In the southern foothills, Alberta Pacific Consolidated's No. 1 Sheppard Creek, LSD 6, Section 7-16-2w5, is below 2,790 ft. Oil Field Development's No. 1 has been spotted 18 miles farther south, in LSD 7, Section 7-13-2w5.

On the Savannah Creek structure, Anglo-Canadian Oil Co.'s No. 1, SW¼ Section 20-14-4w5, is below 3,375 ft.

Aldersyde Deep Test

On the Aldersyde structure east of Turner Valley, Ranchmen's Oil Co.'s No. 1, LSD 16, Section 13-20-29w4, bottoming at 7,231 ft., has recovered tools lost at 7,000 ft. and is cleaning out preparatory to deepening. This test was started on January 1, 1927, and has been drilling intermittently since, though shut down for over a year. Some 12 different gas shows were met between 195 and 6,940 ft. with eight oil shows and no water, several varieties of crude being encountered in different horizons. The test is believed to have got the Dalhousie around 7,200 ft. and should get the lime with a few hundred feet more drilling.

Border Fields

On the Spring Coulee structure, in the border area of southern Alberta, E. L. Cord's No. 1, LSD 16, Section 35-3-23w4, is 93 ft. in the lime at 6,080 ft. and preparing to test production from two oil-saturated zones in the lime. Casing will be gun-perforated in these and other promising horizons and the formations acidized. Tankage has been set up and high-pressure control equipment is on the ground.

In the Taber field, Border Petroleums' No. 1, LSD 5, Section 32-19-17w4, bottoming in the lime at 3,423 ft. is testing production after cementing for water shutoff.

Keho Dome Test

Keho Dome Oils, financed largely in the Carmangay district of southern Alberta, is preparing for No. 1 test in LSD 3, Section 18-11-22w4. Hudson's Bay Oil Co. in 1931 drilled to 4,926 ft. on this structure, encountering shows of crude in the lime and a small commercial production in the overlying Benton shales, which made about 1 bbl. an hour. Numerous structure tests have been drilled in the general area. The new location is about a mile west of the Hudson's Bay well and higher on structure. Maximum drilling depth at this point is estimated 4,000 ft. with the main producing horizon around 3,800 ft.

Steveville Field

In the Steveville field, east of Calgary, Anaconda Oil Co.'s No. 1, LSD 15, Section 9-22-12w4, has been shut down for the winter at 3,732 ft. after losing bailer in the hole. The test is believed to have entered the Devonian lime at 3,460 ft.

In southern Alberta a local test on the Mack Higdon ranch, near Manyberries, encountered a considerable gas flow at 900 ft. Gas will be used on the ranch property, and further development may be undertaken.

Standard of British Columbia's No. 1 Princess, LSD 13, Section 22-20-12w4, has resumed after underreaming to set 9-in. casing at 3,240 ft. Casing was set some 50 ft. in the Madison limestone, a gas flow of around 8,000 cu. ft. with no water being met at the contact.

Kamsack Drilling

In the Kamsack area, eastern Saskatchewan, No. 1 joint test of Franco Oils and Coalgate Oils has been finished at around 425 ft., and No. 2 is drilling. Two additional tests will be drilled. Franco Oils has secured a half interest in the Coalgate holdings in the Kamsack area, where considerable shallow gas has been developed.

Richfield Officers

Shareholders of Richfield Petroleums, Ltd., at their annual meeting at Calgary elected the following officers: President, W. S. Henderson; vice president, Byron Harmon; secretary, J. L. Sadleir; directors, Alf Cooper and William Howe.

Ontario Drilling

In the Brownsville field, in Oxford County, Ontario, Central Pipe Line Co.'s No. 2, Annie Berdan farm, NE¼ S½, Lot 24, Concession 12, Dereham Township, finished at 926 ft. with about 1,250,000 cu. ft. a day. Central Pipe Line Co. is rigging for another test on the Kilmer farm, NE cor S½ Lot 26, Concession 12.

In the De Clute field, Kent County, Gas Producers Syndicate, Gilbert Pardo farm, Lot 139, South Talbot Road, Raleigh Township, is drilling below 1,540 ft. Union Gas Co.'s No. 48, W¼ Lot 140, South Talbot Road, is drilling.

In Harwich Township, Kent County, Snell Syndicate's No. 1 on the Harold English farm, south of Chatham, is shut down at 1,670 ft. after failing to get production. It may be deepened to the Trenton limestone.

Enters Oil Burner Field

John D. Collins, vice president in charge of sales for the Tide Water division of Tide Water Associated Oil Co., announces that the company has recently placed on the market in eastern states its new Tydol Silent Knight Automatic Oil Burner. Tide Water Associated Oil Co. has for many years been one of the major distributors of fuel oil for heating purposes but has not heretofore engaged in the manufacture and sale of oil burners.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Depth	Status
Union Oil, No. 73 Callender, Dominguez, Los Angeles	32- 3-13	4,732	sd. sh. drlg.
Union Oil, No. 74 Callender, Dominguez, Los Angeles	29- 3-13	7,360	O.S. drlg.
Shell Oil, No. 100 Reyes, Dominguez, Los Angeles	33- 3-13	6,989	sd. sh. drlg.
Havenstrite, R. E., No. 1 Larronde, Dominguez, L. A.	32- 3-13	6,784	sd. sh. drlg.
Barnsdall Oil, No. 1 Santa Fe, Rosecrans, Los Angeles	20- 3-13	7,570	sd. sh. drlg.
Averill, George, No. 3 South, Rosecrans, Los Angeles	20- 3-13	8,780	cleaning out
St. Anthony Oil, No. 1 Gordon, Rosecrans, Los Ang.	19- 3-13	2,977	sd. sh. drlg.
Kelly & Sons, No. 1 McMillen, Rosecrans, Los Angeles	20- 3-13	1,994	sd. sh. drlg.
Univ. Consd. Oil, No. 18 Trust, Rosecrans, Los Ang.	18- 3-13	7,330	sd. sh. drlg.
Casa Grande Oil, No. 1 Lopez, San Fernando, L. A.	1- 2-15	2,220	sd. sh. drlg.
Tide Water A., No. 3 Porter, Aliso Canyon, Los Ang.	27- 3-16	1,203	sd. sh. drlg.
Tide Water A., No. 12 Porter, Aliso Canyon, Los Ang.	27- 3-16	5,962	hd. sd. drlg.
Tamas Oil, No. 1 Perkins, Newhall, Los Angeles	14- 3-16	3,480	sd. sh. drlg.
Consolidated Pet., No. 4 Needham, Newhall, Los Ang.	13- 3-16	3,774	hd. sd. drlg.
Barnsdall Oil, No. 8 R.S.F., Newhall, Los Angeles	27- 4-17	6,140	sd. sh. drlg.
General Pet., No. 101 P.E., Wilmington, Los Angeles	35- 4-13	3,055	O.S. drlg.
Gremac Oil, No. 3 Harbor, Wilmington, Los Angeles	4- 5-13	2,492	sd. sh. drlg.
Hollywood Oil, No. 8 Baxter, Wilmington, Los Ang.	35- 4-13	3,350	flow. 285 b.d.
Inter-Counties Pet., No. 1 Edgar, Wilmington, L. A.	35- 4-13	1,847	sd. sh. drlg.
Jackson Expl., No. 1 Workman, Wilmington, L. A.	35- 4-13	3,520	completing
L. A. Basin Drlg., No. 3 Kupfer, Wilmington, L. A.	35- 4-13	2,798	sd. sh. drlg.
Long Beach Dev., No. 7-W Harbor, Wilmington, L. A.	3- 5-13	4,034	flow. 245 b.d.
Long Beach Dev., No. 8-W Harbor, Wilmington, L. A.	3- 5-13	2,560	sd. sh. drlg.
Long Beach Dev., No. 9-W Harbor, Wilmington, L. A.	3- 5-13	2,377	sd. sh. drlg.
Royalty Service, No. 3 Santa Fe, Wilmington, L. A.	33- 4-13	5,481	sd. sh. drlg.
Royalty Service, No. 7-B Nelson, Wilmington, L. A.	33- 4-13	5,720	sd. sh. drlg.
Richfield Oil, No. 32 Pac. Dock, Wilmington, L. A.	35- 4-13	3,336	flow. 160 b.d.
Union Pacific, No. 119, Wilmington, Los Angeles	3- 5-13	3,898	flow. 1,480 b.d.
Union Pacific, No. 121, Wilmington, Los Angeles	3- 5-13	1,820	sd. sh. drlg.
Union Pacific, No. 122, Wilmington, Los Angeles	3- 5-13	2,966	sd. sh. drlg.
Union Pacific, No. 123, Wilmington, Los Angeles	4- 5-13	3,180	will deepen
Union Pacific, No. 124, Wilmington, Los Angeles	4- 5-13	2,831	sd. sh. drlg.
Union Pacific, No. 126, Wilmington, Los Angeles	4- 5-13	2,969	sd. sh. drlg.
Union Pacific, No. 19-E, Wilmington, Los Angeles	3- 5-13	4,005	flow. 587 b.d.
Zephyr Oil, No. 2 Harbor, Wilmington, Los Angeles	33- 4-13	3,615	completing
Kern Oil, No. 31 Monterey, Montebello, Los Angeles	2- 2-12	7,195	sd. sh. drlg.
Kern Oil, No. 35 Monterey, Montebello, Los Angeles	2- 2-12	6,680	sd. sh. drlg.
Union Oil, No. 1 Howard, Montebello, Los Angeles	11- 2-12	6,244	will deepen
Union Oil, No. 6 Wilcox, Montebello, Los Angeles	11- 2-12	7,608	O.S. drlg.
Union Oil, No. 35 La Merced, Montebello, Los Angeles	1- 2-12	7,630	flow. 499 b.d.
Albertson Oil, No. 2 Schnakenberg, Montebello, L. A.	3- 2-12	5,770	sd. sh. drlg.
Angle Oil, No. 1 Community, Montebello, Los Angeles	11- 2-12	7,481	sd. sh. drlg.
Bush Oil, No. 1 Mihlfred, Montebello, Los Angeles	3- 2-12	7,694	flow. 316 b.d.
Bush Oil, No. 1 Newhouse, Montebello, Los Angeles	3- 2-12	2,365	sd. sh. drlg.
Bush Oil, No. 2 Zanetti, Montebello, Los Angeles	3- 2-12	3,084	sd. sh. drlg.
Caminol Co., No. 3-17 Cowan, Montebello, Los Angeles	3- 2-12	7,640	flow. 505 b.d.
C. A. P. Oil, No. 1 Dutch, Montebello, Los Angeles	11- 2-12	7,657	liner froze
Crestline Oil, No. 1 Pedro, Montebello, Los Angeles	11- 2-12	2,972	sd. sh. drlg.
Dutch Oil, No. 1 Scheinik, Montebello, Los Angeles	3- 2-12	7,602	O.S. drlg.
Fremont Oil, No. 1 Aldrich, Montebello, Los Angeles	12- 2-12	7,391	sd. sh. drlg.
Fremont Oil, No. 1 Moynier, Montebello, Los Angeles	12- 2-12	6,466	sd. sh. drlg.
Fullerton Oil, No. 3 Scott, Montebello, Los Angeles	1- 2-12	7,380	O.S. drlg.
Golden Eagle Oil, No. 1 Lehman, Montebello, L. A.	10- 2-12	7,393	O.S. drlg.
Golden Eagle Oil, No. 2 Lehman, Montebello, L. A.	10- 2-12	7,350	sd. sh. drlg.
Herley-Kelly, Inc., No. 2 De Staute, Montebello, L. A.	11- 2-12	7,181	sd. sh. drlg.
Larson Drlg., No. 3 Van Deusen, Montebello, Los Ang.	11- 2-12	7,894	deep test
Master Pet., No. 1 Grant, Montebello, Los Angeles	2- 2-12	7,455	O.S. drlg.
M. O. C. Oil, No. 1 Zinn, Montebello, Los Angeles	11- 2-12	6,462	sd. sh. drlg.
Mabee Co., No. 37 Monterey, Montebello, Los Angeles	3- 2-12	3,757	sd. sh. drlg.
Montebello Oil, No. 1 Nordon, Montebello, Los Ang.	3- 2-12	7,595	completing
Pacific-Amer. Oil, No. 1 Groen, Montebello, Los Ang.	11- 2-12	7,649	P.B. 7,601
Pueblo Oil, No. 2 Bird, Montebello, Los Angeles	11- 2-12	6,972	sd. sh. drlg.
Pongratz Pet. Co., No. 2 Newmark, Montebello, L. A.	3- 2-12	7,653	flow. 240 b.d.
Rainbow Pet., No. 1 Beverly, Montebello, Los Ang.	11- 2-12	5,082	sd. sh. drlg.
Shoreline Drlg., No. 1 Mont., Montebello, Los Angeles	11- 2-12	4,449	sd. sh. drlg.
Sunset Oil, No. 1 Robinson, Montebello, Los Angeles	12- 2-12	7,486	tested wet
Star Pet., No. 1 Caneer, Montebello, Los Angeles	11- 2-12	7,635	completing
Texas Co., No. 2 Wilcox, Montebello, Los Angeles	3- 2-12	2,997	sd. sh. drlg.
Traders Oil, No. 2 Center, Montebello, Los Angeles	2- 2-12	7,675	completing
Winlock Oil, No. 1 Win, Montebello, Los Angeles	11- 2-12	5,161	sd. sh. drlg.
Wood-Callahan Oil, No. 2 Todd, Montebello, Los Ang.	2- 2-12	5,743	sd. sh. drlg.
York Oil, No. 6 Mulholland, Montebello, Los Angeles	2- 2-12	7,630	flow. 285 b.d.
Allied Pet., No. 34 Signal, Long Beach, Los Angeles	30- 4-12	3,482	sd. sh. drlg.
Atlantic Oil, No. 14 Signal, Long Beach, Los Angeles	19- 4-12	2,230	sd. sh. drlg.
Dormax Oil, No. 1 Signal, Long Beach, Los Angeles	30- 4-12	10,394	O.S. drlg.
Richfield Oil, No. 8-B City, Long Beach, Los Angeles	29- 4-12	4,290	sd. sh. drlg.
El Hondo Pet., No. 1 Venago, Long Beach, Los Ang.	24- 4-13	10,093	fish. D.P.
Johnston Drlg., No. 39 Signal, Long Beach, Los Ang.	24- 4-13	2,132	sd. sh. drlg.
Caminol Co., No. 3-19 Dominguez, Long Beach, L. A.	11- 4-13	1,973	sd. sh. drlg.
Union Oil, No. 24 Chapman, Richfield, Los Angeles	29- 3-9	4,852	redrlg. 4,280
Welco Oil, No. 1 Yorba, Richfield, Los Angeles	28- 3-9	1,960	sd. sh. drlg.
Master Pet., No. 1 Wright, East Coyote, Orange	19- 3-9	4,208	idle
Thompson, M. N., No. 1 Mesa, Costa Mesa, Orange	9- 6-10	1,702	sd. sh. drlg.
Southwest Expl., No. 24 State, Hunt. Beach, Orange	10- 6-11	3,480	sd. sh. drlg.
Alabama Oil, No. 1 Rochester, Hunt. Beach, Orange	2- 6-11	3,130	P.B. 2,750

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Depth	Status
Navy Oil, No. 1 O'Donnell, Santa Maria, S. Barbara	29-10-34	5,160	sd. sh. drlg.
Shell Oil, No. 1 Barrett, San Marcos, Santa Barbara	18- 6-29	933	rigging up
General Pet., No. 5 More, Goleta, Santa Barbara	15- 4-28	1,178	sd. sh. drlg.
Coronet Oil, No. 4 Crown, Ojai, Ventura	17- 4-21	674	sd. sh. drlg.
Rilling, H. L., No. 1 Camden, So. Mountain, Ventura	13- 3-21	3,020	sd. sh. drlg.
Renard Oil, No. 1, Sespe, Ventura	6- 4-19	930	sd. sh. drlg.
Continental Oil, No. 13 Grubb, San Miguelito, Ventura	24- 3-24	3,355	sd. sh. drlg.
Continental Oil, No. 14 Grubb, San Miguelito, Ventura	24- 3-24	6,461	sd. sh. drlg.
C. C. M. Oil, No. 2-B Hobson, Rincon, Ventura	8- 3-24	4,046	P.B. 3,815
C. C. M. Oil, No. 28-B Hobson, Rincon, Ventura	16- 3-24	4,700	tested wet
Tide Water A., No. 42 V.L.W., Ventura Ave., Ventura	23- 3-23	9,125	recmtd. 9,120
Tide Water A., No. 43 V.L.W., Ventura Ave., Ventura	23- 3-23	2,161	sd. sh. drlg.
Tide Water A., No. 44 V.L.W., Ventura Ave., Ventura	23- 3-23	9,294	sd. sh. drlg.
Tide Water A., No. 15 McGonigle, Ventura Ave., Vent.	23- 3-23	10,050	flow. 1,294 b.d.
Tide Wate A., No. 16 McGonigle, Ventura Ave., Vent.	23- 3-23	7,940	sd. sh. drlg.
Tide Water A., No. 120 Lloyd, Ventura Ave., Ventura	27- 3-23	5,577	sd. sh. drlg.
Tide Water A., No. 121 Lloyd, Ventura Ave., Ventura	23- 3-23	9,890	sd. sh. drlg.
Tide Water A., No. 20 Hartman, Ventura Ave., Vent.	22- 3-23	6,474	sd. sh. drlg.
Tide Water A., No. 21 Hartman, Ventura Ave., Vent.	22- 3-23	6,880	sd. sh. drlg.
Shell Oil, No. 103 Taylor, Ventura Ave., Ventura	21- 3-23	8,239	flow. 3,394 b.d.
Shell Oil, No. 106 Taylor, Ventura Ave., Ventura	29- 3-23	7,531	sd. sh. drlg.
Shell Oil, No. 108 Taylor, Ventura Ave., Ventura	29- 3-23	8,072	sd. sh. drlg.
Brit. Amer. Pet., No. 9 Hartman, Ventura Ave., Vent.	21- 3-23	5,991	sd. sh. drlg.
Lloyd Corp., No. 3 Dabney, Ventura Ave., Ventura	23- 3-23	10,360	P.B. 9,980
Lloyd Corp., No. 4 Dabney, Ventura Ave., Ventura	23- 3-23	9,960	O.S. drlg.
Belridge Oil, No. 1-26, North Belridge, Kern	1-28-20	3,654	sd. sh. drlg.
Belridge Oil, No. 4-27, North Belridge, Kern	27-27-20	8,515	redrlg. 6,533
Abbott, F. E., No. 1 Gamble, Blackwell's Corner, Kern	7-27-20	1,220	cleaning out
McDonald & Dearin, No. 3 Kernco, Kern Front, Kern	10-28-27	2,245	gr. sh. drlg.
Davis Pet., No. 1 Kernco, Kern Front, Kern	13-28-27	366	sd. sh. drlg.
Sleeper Ridge Oil, No. 1 Kern, Kern River, Kern	15-29-28	1,801	idle
D. & D. Oil, No. 8 Kern, Kern River, Kern	34-28-28	565	pump. 5 b.d.
D. & D. Oil, No. 9 Kern, Kern River, Kern	34-28-28	296	sd. sh. drlg.
D. & D. Oil, No. 10 Kern, Kern River, Kern	34-28-28	515	O.S. drlg.
D. & D. Oil, No. 11 Kern, Kern River, Kern	34-28-28	366	sd. sh. drlg.
O. & D. Oil, No. 12 Kern, Kern River, Kern	34-28-28	447	pump. 5 b.d.
D. & D. Oil, No. 13 Kern, Kern River, Kern	34-28-28	460	sd. sh. drlg.
Helm & Smith, No. 16 Kern, Kern River, Kern	34-28-28	499	O.S. drlg.
Crestmont Oil, No. 2 Buchner, Mount Poso, Kern	20-26-28	1,562	P.B. 1,557
Ring Oil, No. 5 Bohen, Mount Poso, Kern	32-26-28	1,645	pump. 285 b.d.
Caminol Co., Ltd., No. 1-18 Poso, Mount Poso, Kern	24-26-27	2,218	dry; abd.
Crusaders Oil, No. 1 Quinn, Jasmine, Kern	8-25-27	3,087	sd. sh. drlg.
Hogan Pet., No. 1 Wible, Mountain View, Kern	23-30-29	6,619	P.B. 5,950
Shell Oil, No. 3-20 Voorhies, Mountain View, Kern	20-30-29	2,468	sd. sh. drlg.
Allied Pet., No. 33 Allied, Mountain View, Kern	19-30-29	4,640	pump. 130 b.d.
O'Reily, Frances, No. 2 Seale, Edison, Kern	5-30-29	4,103	cleaning out
El Tejon O. & R., No. 1 Douglas, Edison, Kern	32-29-29	4,090	sd. sh. drlg.
Kern Valley Drlg., No. 1 Kern, Round Mountain, Kern	4-29-29	1,898	will deepen

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Acd., acidized.
B.O., barrels of oil.
B.P.D., barrels per day.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
B. ck., bottom choke.
Br. sh., brown shale.
B.S., basic sediment.
C.&P., cellar and pits.
Cd. or Crd., cored.
C.D., correct depth.
Cg., coring.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg., or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.S.T., drill-stem test.
D.P., drill pipe.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging back.
P.B.P., pulling or pulled big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Recvd., recovered.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtrkd. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.O., or S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas, and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T. ck., top choke.
T.P., tubing pressure.
Tr., tract.
Tstd., tested.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.O.O., waiting on orders.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.R. or W.O.S.R., awaiting standard rig.
Wtr., water.

Texas Co., No. 1 Mott, Arvin, Kern	9-31-29	5,750	sd. sh. drlg.
Richfield Oil, No. 2 Mott, Arvin, Kern	9-31-29	6,155	water witch
Western Gulf Oil, No. 44-B, KCL, Fruitvale, Kern	22-29-27	3,857	P.B. 3,797
Western Gulf Oil, No. 12 Red Ribbon, Fruitvale, Kern	27-29-27	4,009	pump. 132 b.d.
Meridian Pet., No. 2 Deep Test, Fruitvale, Kern	23-29-27	3,742	pump. 65 b.d.
Richfield Oil, No. 1, KCL, Fruitvale, Kern	29-29-27	4,400	prod. test
Union Oil, No. 4-23 Bowerbank, Goose Lake, Kern	25-29-24	11,050	sd. sh. drlg.
Trico Oil & Gas, No. 1 Tulare, Delano gas field, Kern	27-24-23	2,470	30,000 M.c.f.
Standard Oil, No. 3 Mushrush, Wasco, Kern	7-27-24	9,998	sd. sh. drlg.
Union Oil, No. 21-34, KCL, Rio Bravo, Kern	34-28-25	3,087	sd. sh. drlg.
Union Oil, No. 52-34, KCL, Rio Bravo, Kern	34-28-25	2,993	sd. sh. drlg.
Superior Oil, No. 1 Smith, Rio Bravo, Kern	34-28-25	11,464	flow. 3,032 b.d.
Superior Oil, No. 2 Fink, Rio Bravo, Kern	27-28-25	6,994	sd. sh. drlg.
Standard Oil, No. 1 Ross, Greeley, Kern	20-29-26	11,530	O.S. drlg.
Standard Oil, No. 11-20, KCL, Greeley, Kern	18-29-26	11,390	hd. sh. drlg.
Standard Oil No. 11-21, KCL, Greeley, Kern	18-29-26	10,591	gr. sh. drlg.
Standard Oil, No. 12-5, KCL, Northwest Greeley, Kern	7-29-26	11,392	O.S. drlg.
General Pet., No. 1 Farrand, Northeast Greeley, Kern	12-29-25	3,182	sd. sh. drlg.
Continental Oil, No. 2-D, KCL, Bellevue, Kern	14-30-26	14,051	P.B. 11,802
Shell Oil, No. 32-28-B, KCL, Ten Section, Kern	28-30-26	6,972	sd. sh. drlg.
Shell Oil, No. 61-25-A, KCL, Ten Section, Kern	25-30-25	7,283	sd. sh. drlg.
Tide Water A. O., No. 5-7-E, KCL, Strand, Kern	7-30-26	7,980	sd. sh. drlg.
Shell-Ohio, No. 64-12-A, KCL, Strand, Kern	12-30-25	8,390	sd. sh. drlg.
Ohio Oil, No. 16-E, KCL, Canal, Kern	13-30-25	6,440	sd. sh. drlg.
Shell Oil, No. 6-14-A, KCL, Canal, Kern	14-30-25	8,250	flow. 522 b.d.
Shell Oil, No. 21-13-A, KCL, Canal, Kern	13-30-25	2,987	sd. sh. drlg.
Richfield Oil, No. 12-33-A, KCL, Tupman, Kern	33-30-25	9,040	flow. 1,600 b.d.
Richfield Oil, No. 41-32-A, KCL, Tupman, Kern	32-30-25	8,343	O.S. drlg.
Richfield Oil, No. 67-4-B, KCL, Cole's Levee, Kern	4-31-25	9,590	sd. sh. drlg.
Richfield Oil, No. 76-4-B, KCL, Cole's Levee, Kern	4-31-25	9,554	sd. sh. drlg.
Standard Oil, No. 20-2, KCL, Cole's Levee, Kern	9-31-25	8,660	redrlg. 8,390
Standard Oil, No. 20-3, KCL, Cole's Levee, Kern	9-31-25	9,100	O.S. drlg.
Standard Oil, No. 20-4, KCL, Cole's Levee, Kern	9-31-25	9,691	P.B. 9,398
Ohio Oil, No. 5-F, KCL, Cole's Levee, Kern	10-31-25	9,271	completing
Ohio Oil, No. 6-F, KCL, Cole's Levee, Kern	11-31-25	2,663	sd. sh. drlg.
Tide Water A., No. 81, KCL, Cole's Levee, Kern	14-31-25	10,796	sd. sh. drlg.
Tide Water A., No. 65, KCL, Cole's Levee, Kern	13-21-25	7,253	sd. sh. drlg.
Union Oil, No. 56-11, KCL, Cole's Levee, Kern	11-31-25	7,387	sd. sh. drlg.
Quality Oil, No. 4 Cypress, Midway-Sunset, Kern	22-32-23	1,050	sd. sh. drlg.
Quality Oil, No. 6 W.P., Midway-Sunset, Kern	27-32-23	1,975	pump. water
Merritt-Annex Oil, No. 8 Fried, Midway-Sunset, Kern	25-12-24	2,494	cleaning out
General Pet., No. 1 B.V.A., Midway-Sunset, Kern	1-32-24	10,630	fish. D.P.
Signal Oil & Gas, No. 6 Kendon, Midway-Sunset, Kern	35-32-23	1,869	sd. sh. drlg.
Shell Oil, No. 45-9 B.V.A., Midway-Sunset, Kern	9-32-25	9,890	redrlg. 4,797
National Oil, No. 34 Sunset, Midway-Sunset, Kern	35-32-23	1,990	sd. sh. drlg.
Mitchell, E. H., No. 13 Sunset, Midway-Sunset, Kern	15-31-22	606	sd. sh. drlg.
Texas Co., No. 36 M.S., Midway-Sunset, Kern	32-32-24	3,198	sd. sh. drlg.
Ohio Oil, No. 43-3-B, KCL, Paloma, Kern	3-32-26	7,394	fish. D.P.
Western Gulf Oil, No. 74-3-A, KCL, Paloma, Kern	3-32-26	9,460	sd. sh. drlg.
Richfield Oil, No. 81-36 B.V.A., Buena Vista L., Kern	36-31-25	10,460	sd. sh. drlg.
Continental Oil, No. 1-F, KCL, San Emidio, Kern	5-10-21	9,394	gr. sd. drlg.
Shell Oil, No. 52-2-13-A, KCL, San Emidio, Kern	13-11-22	12,091	hd. sh. drlg.
Burt & Taylor, No. 1 Rankin, McKittrick, Kern	30-30-22	1,048	idle
Fairfield, F. E., No. 1 Williams, McKittrick, Kern	2-30-21	1,529	idle
Fairfield, F. E., No. 1 Ninkovich, McKittrick, Kern	4-30-21	1,711	dry; abd.
Standard Oil, No. 51-19-B fee, NE. Coalinga, Fresno	19-19-16	7,538	sd. sh. drlg.
Union Oil, No. 57-18 Cook, NE. Coalinga, Fresno	18-19-16	7,885	sd. sh. drlg.
Union Oil, No. 75-18 Cook, NE. Coalinga, Fresno	18-19-16	6,472	sd. sh. drlg.
Amerada Pet., No. 3-17 S.P.L., NE. Coalinga, Fresno	17-19-16	8,190	O.S. drlg.
Bandini Pet., No. 46-18-B, NE. Coalinga, Fresno	18-19-16	5,862	sd. sh. drlg.
Superior Oil, No. 1 Husong, NE. Coalinga, Fresno	18-19-16	8,234	flow. 2,736 b.d.
Lytle, R. S., agent, No. 22-7-F, SE. Coalinga, Fresno	7-20-16	1,874	sd. sh. drlg.
Lytle, R. S., agent, No. 53-7-F, SE. Coalinga, Fresno	7-20-16	7,861	flow. 2,065 b.d.
Lytle, R. S., agent, No. 26-18-F, SE. Coalinga, Fresno	18-20-16	7,193	sd. sh. drlg.
Lytle, R. S., agent, No. 42-18-F, SE. Coalinga, Fresno	18-20-16	5,460	sd. sh. drlg.
Univ. Consd. Oil, No. 81-24-C, SE. Coalinga, Fresno	24-20-15	7,010	sd. sh. drlg.
Texas Co., No. 4 Exeter fee, SE. Coalinga, Fresno	6-20-16	4,276	sd. sh. drlg.
Texas Co., No. 1 Anderson, SE. Coalinga, Fresno	6-20-16	6,990	sd. sh. drlg.
Standard Oil, No. 62-13-C fee, SE. Coalinga, Fresno	13-20-15	7,373	sd. sh. drlg.
Standard Oil, No. 66-13-C fee, SE. Coalinga, Fresno	13-20-15	6,005	sd. sh. drlg.
Standard Oil, No. 75-13-C fee, SE. Coalinga, Fresno	13-20-15	6,898	sd. sh. drlg.
Standard Oil, No. 31-19-F fee, SE. Coalinga, Fresno	19-20-16	6,740	sd. sh. drlg.
Superior Oil, No. 1-B Cagle, SE. Coalinga, Fresno	6-20-16	6,990	sd. sh. drlg.
Superior Oil, No. 4 Huffman, Kettleman N. D., Fresno	29-21-17	10,085	sd. sh. drlg.
K. N. D. A., No. 27-18-J Kettleman N. Dome, Fresno	18-21-17	3,782	sd. sh. drlg.
K. N. D. A., No. 38-22-Q, Kettleman N. Dome, Kings	22-22-18	7,925	cleaning out
K. N. D. A., No. 56-22-Q, Kettleman N. Dome, Kings	22-22-18	7,810	completing
K. N. D. A., No. 36-26-Q, Kettleman N. Dome, Kings	26-22-18	6,984	sd. sh. drlg.
K. N. D. A., No. 47-26-Q, Kettleman N. Dome, Kings	26-22-18	7,561	sd. sh. drlg.
K. N. D. A., No. 41-28-Q, Kettleman N. Dome, Kings	28-22-18	7,605	P.B. 7,250
Standard Oil, No. 27-19-J, Kettleman N. Dome, Fresno	19-21-17	10,590	gr. sh. drlg.
Standard Oil, No. 72-19-J, Kettleman N. Dome, Fresno	19-21-17	10,403	sd. sh. drlg.
Standard Oil, No. 27-7-Q, Kettleman N. Dome, Kings	7-22-18	9,520	sd. sh. drlg.
Standard Oil, No. 54-7-Q, Kettleman N. Dome, Kings	7-22-18	6,998	sd. sh. drlg.
Standard Oil, No. 63-7-Q, Kettleman N. Dome, Kings	7-22-18	7,360	sd. sh. drlg.
Standard Oil, No. 32-17-Q, Kettleman N. Dome, Kings	17-22-18	6,901	hd. sh. drlg.
Standard Oil, No. 61-17-Q, Kettleman N. Dome, Kings	17-22-18	5,982	sd. sh. drlg.
Standard Oil, No. 72-17-Q, Kettleman N. Dome, Kings	17-22-18	6,074	redrlg. 5,791
Standard Oil, No. 76-17-Q, Kettleman N. Dome, Kings	17-22-18	5,962	sd. sh. drlg.
Standard Oil, No. 83-17-Q, Kettleman N. Dome, Kings	17-22-18	7,145	br. sh. drlg.
Standard Oil, No. 52-21-Q, Kettleman N. Dome, Kings	21-22-18	6,680	br. sh. drlg.
Standard Oil, No. 74-21-Q, Kettleman N. Dome, Kings	21-22-18	6,953	br. sh. drlg.
Standard Oil, No. 32-27-Q, Kettleman N. Dome, Kings	27-22-18	7,800	sd. sh. drlg.
Standard Oil, No. 63-35-Q, Kettleman N. Dome, Kings	35-22-18	5,775	sd. sh. drlg.
Compass Oil, No. 1 Points, Deer Creek, Tulare	8-23-26	3,830	gr. sd. drlg.
Priest Valley Pet., No. 1 Greve, Priest Val., Monterey	22-20-12	1,470	gr. sd. drlg.
Buttes Oilfields, Inc., No. 6 Buttes, Marysville, Sutter	1-15-1	6,090	cleaning out
Seaboard Oil, No. 1 Howard, Bear Creek, Merced	6- 8-11	6,660	sd. sh. drlg.
Texas Co., No. 1 Welch, Rio Vista gas fld., Sacramento	5- 3-3	4,199	shut in

OKLAHOMA

Week Ended December 2

NORTHERN OKLAHOMA

Caddo County

Sinclair Prairie Oil Co. No. 1 Gorman SW NW NW Sec. 1-16-13w. S. heavy oil; cd. 6,442-49 ft.; Wdfrd. 6.600 ft.; Hntn. 7,157 ft.; cd. 7,439-44 ft.; rec. S.O.; drlg. 8,048 ft.

Cleveland County

Nels Burton No. 1 Boggs, NE NE SE Sec. 16-9-2w. 2nd Wlx. 7,585 ft.; T.D. 7,646 ft.; P.B. 7,473 ft.; shot and acd.; P. 113 B.O.P.D.; 20 to 50% wtr.

Sinclair-Prairie No. 1 Ward, SE SE SE Sec. 30-7-1. Hntn. 6,185 ft.; Vla. 6,40? ft.; open 30 min. at 6,800 ft., rec. S W.; P.B. to 6,782 ft.; swb. 106 B.O. in 24 hrs.; hvy. blk. oil; drlg. 8,162 ft.

J. F. Smith's No. 1 Corbett, C SW NE Sec. 20-6-1. (O.W.D.D.); O.T.D. 6,760 ft.; 6-in. 6,320 ft.; C.O. 740 ft.

Canadian County

W. R. Ramsey's No. 1 Mansfield. C NW NE Sec. 16-14-9w. Lytn. 6,800-6,920 ft.; sd. 9,191 ft., S.S.G.; T.D. 9,519 ft.; to run Schlm.

Comanche County

Mid Night Oil No. 1 Howe, NW NW NE Sec. 30-2-13w. O.W.D.D.; O.T.D. 703 ft., fsg. 998 ft.

Creek County

A. S. Kaplan's No. 1 Mills, NW NW SE Sec. 12-15-9. Drlg. 950 ft.

Sunray Oil Co. No. 1 Harris, SW SW NE Sec. 30-14-7. T.D. 2,927 ft.; est. 370,000 cu. ft. gas.

Dewey County

Magnolia Pet. Co.'s No. 1 Fiekes, C SW SW Sec. 31-18-14w. Drlg. 2,547 ft.

Garvin County

Duckworth & Jennings' No. 1 Bowie, NW NE SE Sec. 3-4-3. W.O.C. 60 ft.

Robinson & Midco's No. 1 Clay, SW SW NW Sec. 21-4-3. Simp. dense 3,145 ft.; cd. 3,277-94 ft.; rec. 13 ft. sdy. dolo.; T.D. 3,503 ft.; S.D.

Grady County

Alma Oil Co.'s No. 5 Pettit (O.W.D.D., SE SE SE Sec. 11-4-8w. T.D. 3,660 ft.; P. 60 B.O. in 24 hrs.; S.D., tanks.

John Graham's No. 1-A Thomas, NW SW NE Sec. 19-5-7w. Drlg. 2,720 ft.

Grant County

Magnolia Pet. Co.'s No. 1 Margay-Johnson, SW SW NE Sec. 29-25-8w. Drlg. 6,450 ft.

Hughes County

Senora O. & G. Co.'s No. 1 Warren, NW NW SE Sec. 35-6-8. Drlg. 3,075 ft.

Jackson County

English Drlg. Co.'s No. 1-A Aetna Life SE SE NE Sec. 26-3-20w. U.R. 8-in., T.D. 1,402 ft.

Jefferson County

H. M. Weir No. 1 Carmichael, NE NE SW Sec. 23-7s-7w. Drlg. 3,525 ft.

Kay County

Malarnee Oil Co.'s No. 1 Harris, C SW NE Sec. 14-25-1. Drlg. 2,027 ft.

Zephyr Drlg. Co.'s No. 1 High, NE NW NW Sec. 24-26-2w. Drlg. 2,500 ft.

Kingfisher County

Anderson-Prichard No. 1 Geis, C NE SW Sec. 15-18-9w. Lytn. 6,450-6,510 ft.; T.D. 8,507 ft.; P.B. 7,365 ft.; ga. 3,000,000 cu. ft. gas; est. 12 bbl. dist.

Ace Gutowsky No. 1 Lankford, NE NE SE Sec. 34-17-6w. Miss. 7,014 ft.; Woodford 7,531 ft.; Msnr. 7,562 ft.; Wlx. 8,105 ft.; 2nd Wlx. 8,275 ft.; T.D. 8,330 ft.; S.D.O.

Kiowa County

Bollen-Dillard & Roberts No. 1 Holcomb, NE NE SW Sec. 25-7-19w. Drlg. 1,470 ft.

Frank Dillard et al's No. 1 Hobbs, SE SE NW Sec. 35-6-17w. Gr. wsh. 555 ft.; drlg. 593 ft.

Hagerling et al No. 1 Bozeman, SE SE NE Sec. 14-5-18w. Drlg. 1,286 ft.

C. J. Hagerling No. 1 Kimray, SW SW NW Sec. 36-5-18w. T.D. 1,592 ft.; S.D.

Lincoln County

Black Gold No. 1 Locquchment, NE NE NE Sec. 28-14-6. T.D. 3,175 ft.; est. 5 B.O.P.D.; S.D.

Youngblood et al's No. 1 Wright, NE NE SE Sec. 32-16-6. Drlg. 3,737 ft.

Noble County

Franks & Ellis' No. 1 Stranka, SW SW NW Sec. 35-24-1w. S.D. 1,400 ft.

Okfuskee County

Aggis 'No. 1 Sporleder, NE NE NW Sec. 25-11-9. S.D. 1,672 ft.

Osage County

Midco Oil Co.'s No. 1 Osage, NE NE SW Sec. 17-22-8. S.D. 2,847 ft.

Payne County

Helmerich & Payne's No. 1 Berry, Sec 14-17-6. T.D. 4,870 ft. in Wlx.; F. 220 B.O. in 12 hrs.

C. R. Hoagland No. 1 Stanolind, SE SE SW Sec. 27-18-4. Miss. 3,800 ft.; T.D. 3,905 ft.; D.P. stk.

Pontotoc County

Crescent Oil Co.'s No. 2 Thompson, NE NW SW Sec. 29-3-4. Drlg. by at 216 ft.

Pottawatomie County

Harper & Turner's No. 1 Robinette, SE NE NW Sec. 2-9-4. Drlg. 2,886 ft.

Neustadt et al No. 1 Howeth, NE SE NE Sec. 14-6-4. Sd. and S.S.O. 3,455-60 ft.; T.D. 5,387 ft.; Vla. 5,103 ft.; 2d Wlx. 5,308 ft.; D.&A.

Sequoyah County

Thompson Bros. No. 1 Ruby, NW NW NE Sec. 30-12-22. Hntn. 1,451 ft.; T.D 1,912 ft. (cor.); S.D.

Washita County

Continental Oil Co. No. 1 Proctor, C NW Sec. 28-10-20w. T.D. 14,582 ft.; set retainer 13,350 ft.; cmtd. 2,500 ft. of D.P.; fsg.

SOUTHERN OKLAHOMA

Carter County

W. F. Turner's No. 1 Smith, NE SW SE Sec. 16-3s-1w. S.D. wtr. 2,650 ft.

Choctaw County

Clyde Ross et al No. 1 Hardy, SE SE NW Sec. 21-7s-15. T.D. 1,720 ft.; S.D.

Jefferson County

Fred Land et al's No. 1 Barrett, NE SE SE Sec. 14-6s-6w. Sd. 1,852 ft., S.O.; D. P. stk. at 1,100 ft.; T.D. 1,890 ft.

Marshall County

Hughes et al No. 1 Vittitto, C NE SE Sec. 11-5s-4e. O.W.D.D.; O.T.D. 7,100 ft.; T.D. 7,110 ft.; S.D.

Johnson et al No. 1 Godfrey, SW SE NE Sec. 14-6s-6e. Vla. 2,627 ft.; S.S.O.; T.D. 3,868 ft.; open 40 min. and rec. 50 ft. mud.

Stephens County

Ray Johnson's No. 1 Baker, C SE NW Sec. 35-2s-6w. Open 15 min. and rec. 600 ft. wtr.; T.D. 1,970 ft.; S.D.

Tillman County

Magnolia Pet. Co.'s No. 1 Amyx, NW SE SE Sec. 17-3-16w. T.D. 4,975 ft.; S.D., rprs.

KANSAS

Week Ended December 2 (Descriptions are East unless marked otherwise)

Barbour County

Patton Drlg. Co.'s No. 1 Hoss, C W½ NW SW Sec. 12-30-15w. Drlg. 1,980 ft.

Barton County

C. E. Ash et al's No. 1 Montgomery, NW NW NW Sec. 11-16-11w. Topeka 2,658 ft.; Lan. 3,029 ft.; drlg. 3,045 ft.

B. B. & M. Drlg. Co.'s No. 1 Krier, CEL SE SE Sec. 30-16-11w. Pay 3,322-25 ft., T.D.; P. 148 B.O. in 8 hrs.; pot. 446 bbl.; comp.

Crown Pet. Co. No. 1 Marchand, NE SE NW Sec. 13-20-11w. **Drlg. 2,910 ft.**

Sam Schneider's No. 1 Steckel, C W½ SW NE Sec. 11-20-12w. Drlg. 3,030 ft

Butler County

Allison & Talbott's No. 1 Zink, SE SE NE Sec. 32-29-5. S.O. 2,140 ft.; fsg. 2,710 ft.

Carey & Jennings No. 1 Kelly, C SW Sec. 20-27-4. S.D. 2,660 ft.

Cromwell & Lewis No. 1 Stern, NW NW NW Sec. 27-27-6e. M.I.M.

C. H. Pechin et al's No. 1 Hartenbower (O.W.D.D.), NW NW NW Sec. 16-29-8. O.T.D. 3,257 ft.; Peru sd. 2,476-2,530 ft.; S.D. 1,200 ft.

Coffey County

Hollett's No. 1 Butler, SE SW SE Sec. 28-20-15. Miss. 1,614-37 ft.; T.D. 1,647 ft. (cor.); H.F.W.; abd.

Cowley County

Garden's No. 1 Rahn, SW SW NW Sec. 13-34-5. Bart. 2,936 ft.; S. 2 B.O.P.H.; S.D.O.

Mitchell Drlg. Co.'s No. 1 Ireton, C E½ SE NE Sec. 7-31-4. W.O.C. 100 ft.

E. B. Shawyer's No. 1 Henderson, C W½ NE NE Sec. 4-33-6. Base Miss. 3,536 ft.; Arb. 3,599-3,613 ft.; T.D. 3,640 ft.; H.F.W.; D.&A.

Earl Wakefield's No. 1 Steel, C E½ SW SE Sec. 6-32-6. Drlg. 2,470 ft.

Douglas County

Greenway Oil Co.'s No. 1 Grosdedier, C E½ SE NE Sec. 24-13-20. Drlg. 740 ft.

Ellis County

Virginia Drlg. et al's No. 1 Craig, CEL SE SE Sec. 8-11-16w. Drlg. 3,100 ft.

Ellsworth County

Cities Service Oil Co.'s No. 1 Padiena, SE SE SE Sec. 26-14-10w. Drlg. 220 ft.

Greenwood County

Chas. Barker's No. 1 Gregg, SW NW SE Sec. 35-25-12. (O.W.D.D.). O.T.D. 1,660 ft.; drlg. 1,955 ft.

A. A. Hinze et al's No. 1 Hester, NW SW NE Sec. 1-22-12. S.D. 510 ft.

Marylyn Oil Co.'s No. 1 Burke, NE NE SW Sec. 27-24-11. S.D. 50 ft.

Jefferson County

E. W. Mosbacker et al's No. 1 McLaughlin, SW NE NW Sec. 4-10-20. Bart. 1,422-26 ft.; at 1,430 ft. est. 6,000,000 cu. ft. gas; Miss. 1,465 ft.; drlg. 1,620 ft.

Kingman County

Skelly Oil Co. No. 1 Miller, CSL N½ NE Sec. 31-27-10w. Set 7-in. 4,067 ft.; R.U. S.T.

McPherson County

Fain Drlg. Co.'s No. 1 Briggs, CWL SW SW Sec. 21-20-5w. Drlg. 3,120 ft.
Tom Palmer's No. 1 Williams, CEL SE NE Sec. 32-19-5w. W.O.C. 144 ft.
Sunray Oil Co.'s No. 1 Anderson, CWL SW NW Sec. 17-20-5w. Drlg. 2,380 ft.
Westgate-Greenland's No. 1 Chindberg, C N½ NE SE Sec. 18-18-1w. Drlg. 475 ft.

Marion County

Polhamus et al's No. 1 Noone, NW NW SE Sec. 18-18-3. Kans. City 1,680 ft.; drlg. ahead.

Montgomery County

Lerke & Whortan No. 1 Clemmer, C SW SW Sec. 21-32-15. Arb. 1,530 ft.; set 5 in. csg.; W.O.C.

Pratt County

Skelly Oil Co.'s No. 1 Royse, C SW Sec. 9-28-11w. Lans. 3,604 ft.; Vla. 4,246-49 ft.; T.D. 4,268 ft.; S.S.O.; 802,000 cu. ft. gas.

Rice County

H. B. Garden et al's No. 1 Misener, C N½ NW NE Sec. 21-21-7w. Drlg. 3,403 ft.
Saco Oil's No. 1 Habeger, SE SE SW Sec. 12-18-10w. Tpk. 2,494 ft.; Lans. 2,905 ft.; T.D. 3,105 ft.; S. 1 B.O.P.H.; S.D.O.
Stanolind O. & G. Co.'s No. 1 Bredfeldt, CSL SW NE Sec. 2-19-10w. Drlg. 2,310 ft.
Vickers Pet. Co. No. 1-A Rodenberg, CNL NW¼ Sec. 8-18-10w. Lans. 2,930 ft.. Arb. 3,265-81 ft., T.D. N.S.

Rooks County

Broadview Oil No. 1 Baxter, NE SW SW Sec. 35-8-16w. Lans. 3,180 ft.; S.S.O.; T.D. 3,263 ft.; P. 89 B.O. in 7 hrs.; pot. 269 B.O.P.D.

Russell County

Ray Shaffer et al's No. 1 Shaffer, NE NE SW Sec. 9-13-11w. S.D. 1,315 ft.
Shell Oil Co., Inc.'s No. 1 Bender, SW SW SE Sec. 20-15-14w. Drlg. 2,312 ft.

Sheridan County

Cities Service Oil Co.'s No. 1 McGinnis, SW SW NW Sec. 10-9-27w. Drlg. 300 ft.

Stafford County

Continental Oil Co. No. 1 Keller, SE SE SE Sec. 15-24-13w. S.O. 3,733-43 ft., cd. 4,111-16 ft. and rec. 5 ft. sat.; T.D 4,116 ft.; 3,900 ft. O.I.H.
Seaney & Clampitt's No. 1 Brown, SW SW SE Sec. 1-21-13w. Drlg. 1,580 ft.

Woodson County

Bird, Hanley & Sheedy No. 1 Pingrey. C S½ SE Sec. 22-25-15. Spd.

MISSOURI

Adair County

J. W. Eddington et al's No. 1-A Clark. NE NE SE Sec. 8-63-14w. Drlg. 160 ft.
Ward McGinnis' No. 1 Laughlin, SE SE SW Sec. 16-53-34w. Wlx. 1,247 ft.; Arb. 1,345-1,416 ft., T.D.
Morrow & Rodgers and Benedum-Trees' No. 1 Cooley, SE SE NW Sec. 33-64-17w. St. Peter 1,375 ft.; Arb. 1,476-1,526 ft.; no shows; D.&A.

Bolinger County

Delmund Oil No. 1 Cooper, SE SE SE Sec. 14-29-9e. T.D. 1,850 ft.; S.D.

Buchanan County

Miller et al's No. 1 Carrough. C SE SE Sec. 24-57-35w. Cherokee sh. 706 ft.; drlg. 1,011 ft.

Butler County

Coastal Pet. et al No. 1 Pierson. SW NE NW Sec. 27-22-6e. S.D. 149 ft.

Charlton County

L. E. Mummert et al's No. 1 Rickert, NW NE SE Sec. 26-54-20w. Loc.

Clay County

Pabelo Dev. Co.'s No. 5-A Robb, NW NW SE Sec. 36-52-32. T.D. 600 ft.. S.G.; S.D.O.

Daviess County

H. H. Francis' No. 1 Louis, SW NW SW Sec. 29-59-27w. S.D. 760 ft.

Clinton County

C. E. King et al's No. 1 Vanderau, SE NE SW Sec. 18-55-31w. T.D. 1,835 ft.; fighting cave.

DeKalb County

E. H. Lawhon et al's No. 1 Gottschall, C SE SE Sec. 18-59n-32w. Loc.
Geo. W. Moore No. 1 McQuate, NE SW SW Sec. 11-57n-31w. Miss. 1,075 ft.; S.D. csg. 1,500 ft.

Holt County

Brin & Nathan No. 1 Decker, C NW NW Sec. 1-61-38w. T.D. 1,030 ft.; S.D. for csg.

Jackson County

Hulse & Christopher's No. 1 Wiston, NE NW SE Sec. 22-49-32w. T.D. 510 ft.; shot in sd.; no incr.; may dpn.

Knox County

W. H. Oberithier et al's No. 1 Campbell, C NE Sec. 18-61-12w. M.I.M.

Mercer County

Geo. W. Moore No. 1 Moss, NW SW SE Sec. 30-65-24w. Hntn. 1,273 ft.; T.D. 1,879 ft.; fsg.

Platte County

Missouri Valley G. & O. Co.'s No. 1 Jacks, SE cor. Sec. 7-51-33w. C.O. 761 ft.
Geo. A. Vincent et al's No. 1 Dillingham, NE SW Sec. 16-53-34w. Pits; M.I.M.

Randolph County

A. A. Ash et al's No. 1 Alexander, C SE Sec. 14-55-13w. Loc.

Ray County

Loomis-Jordan No. 1 Macey, NE SW NW Sec. 10-53-27w. S.O. 330 ft., T.D.; set csg.

Schuyler County

T. E. Baldwin's No. 1-A Johnson, NW NE NE Sec. 21-65-15w. T.D. 725 ft.; set 8-in.
Rogers & Morrow's No. 1 Seamster, C N½ SW SE Sec. 6-64-13w. T.D. 650 ft.

IOWA

Fremont County

Oscar Gruber's No. 1 fee, C SW SE Sec. 8-67n-40w. Base Ft. Scott 750 ft.; T.D. 1,065 ft.; S.D. for csg.

Guthrie County

F. E. Hunt et al's No. 1 McConnell, C SE SE Sec. 11-78n-30w. Drlg. 400 ft.

Union County

Phillips Pet. Co.'s No. 1 Creston, C SE NE Sec. 31-71-30w. Spudded.

NEBRASKA

Cass County

Golden Rod Oil Co. No. 1 Sparer, SE SE SE Sec. 8-11-13e. S.D. 1,205 ft. in Vla. L.

Dakota County

Peder Skriver's No. 1 Armour, NE NE NE Sec. 33-28-8. T.D. 1,100 ft.; S.D.

Dawes County

G. E. Mitchell's No. 1 Palmer, NW NW SW Sec. 1-33-50w. (O.W.D.D.); O.T.D. 2,964 ft.; R.U. to D.D.

Fillmore County

Dan Kornfeld's No. 1 Mathis, NE NE NE Sec. 22-5-1w. T.D. 1,300 ft.; U.R.

Keith County

California-Nebraska Oil, Ltd.'s No. 1 Guststuehm, NW NW NW Sec. 21-14-37w. Dak. 2,772 ft.; S.O. 2,895-2,901 ft.; S.D. 3,200 ft.

Richardson County

Pawnee Royalty's No. 1 Boice, CSL N½ NE NE Sec. 18-1-16e. Hntn. 2,276 ft.; pmp. 230 B.O. in 24 hrs.; pmp. 122 B. O. 2nd 24 hrs.; T.D. 2,285 ft.; pumping 6 hrs. daily, avg. 60 bbl.
Pawnee Royalty's No. 1 Myers, C NW NW Sec. 24-1-1s. Drlg. 200 ft.
Stephens & Uhri's No. 1 Stauffer, SW SW NE Sec. 21-1n-13e. Spd. 60 ft.

Scotts Bluff County

Albert Wood et al's No. 1 McHenry, SE NE NE Sec. 33-23-57w. T.D. 625 ft.; S.D.
J. A. Fairy Pet.'s No. 1 McCulley, C SE SE Sec. 35-23-58w. S.D. 2,035 ft.

ARKANSAS

Clark County

Coker Oil Corp.'s No. 3 H. H. and H. C. Cabe, 330 ft. SW cor. NW NE Sec. 8-10-20. Set 6-in. csg. 300 ft.; W.O.C.
W. S. King's No. 1 N. Ross, 640 ft. S. 21. T.D. (cor.) 1,855 ft.; ran Schlumberger; W.O.
W. P. Wilson's No. 1 Hamilton & Mathews, C W½ NE NE Sec. 31-10s-20w. Run 10-in. csg. 41 ft.; T. Nac. 358 ft.; S.S.O.; reported S.O.&G. 437 ft.; S.D. 1,650 ft.; W.O.

Columbia County

Arkansas Fuel Oil Co.'s No. 2-B King, C SE NW Sec. 21-17-20. Spudded.
Atlantic Ref. Co.'s No. 1-B Pine Woods Lbr. Co., C SE NW Sec. 16-18-22. T. Cotton Valley 6,490 ft.; cg. 6,930 ft.
Gulf Ref. Co.'s No. 1 Lewis, C SW NE Sec. 12-18-23. Set surf. csg. 214 ft.; W.O.C.
Hunt Oil Co.'s No. 1 McWilliams, C NW NW Sec. 15-18-19. Drlg. sh. 6,605 ft.
Lion Oil Ref. Co.'s No. 1 Warnock est., C NW NW Sec. 15-18-22. T. Cotton Valley 6,407 ft.; drlg. 8,343 ft.
J. K. Mahoney's No. 1 E. Riley, C NW NE Sec. 14-18-19. Reported S.O. 6,400-10 ft.; cg. 6,469 ft.
Placid Oil Co.'s No. 1 Boothe Unit, C NE SE Sec. 10-17-19. R.U.
Shell Oil Co., Inc.'s No. 1 Keith, C SE SE Sec. 9-18-22. 9⅝-in. csg. 2,265 ft.; drlg. sh. 6,643 ft.
Shell Oil Co.'s No. 1 Lewis, C NE NE Sec. 19-17-19. Set 9⅝-in. csg. 2,195 ft.; drlg. 5,251 ft.
Standard Oil Co.'s No. 4 Crone, C SW SE Sec. 8-16-22. Set 9⅝-in. csg. 2,075 ft.; drlg. 3,190 ft.
Standard Oil Co. of La.'s No. 1-B N. Johnson, 655 ft. W, 660 ft. N, SE cor. SE SE Sec. 9-16-22. Drlg. sd.&sh. 6,426 ft.
Standard Oil Co. of La.'s No. 1-B Lewis, 660 ft. N, 560 ft. E, SW cor. SW NE Sec. 19-17-19. T. Smackover L. 7,460 ft.; T. main por.. 7,516 ft.; T.D. 7,627 ft.; tstg. csg. and rng. tbg. to comp.
Standard Oil Co.'s No. 1-B W.B. Merritt et al unit, 560 ft. N, 660 ft. E SW cor. NE SE Sec. 16-17-20. Drlg. sd.& sh. 4,516 ft.
Standard Oil Co. of La.'s No. 1 Petty Stave, C SE SE Sec. 4-17-21. T. Buckner 7,736 ft.; T. Smackover L. 7,943 ft.; cd. por. oolitic L. 7,959-69 ft. S. O.&G.; T.D. 7,969 ft.; conditioned mud; tstg.
Standard Oil Co. of La.'s No. 1 R. S. Warnock, C NW NW Sec. 36-16-20. T. Buckner 7,388 ft.; T. Smackover L. 7,649 ft.; T. por. L. 7,692 ft. S.W.; cd. to 7,744 ft.; W.O.
Superior Oil Co.'s No. 1 Martel, C SW SW Sec. 10-18-22. Set 9⅝-in. csg. 4,107 ft.; drlg. 4,750 ft.
G. H. Vaughn's No. 1 Jameson, C S½ S½ NE Sec. 15-17-20. Drlg. 5,757 ft.

Craighead County

Tennark, Inc., No. 1 R. M. Martin, SE cor. NE NE Sec. 35-14-3e. S.D. 4,148 ft.

Lafayette County

East Texas Ref. Co. et al's No. 1-C C. Warren et al, C NE SE NW Sec. 24-16 24. Drlg. 3,480 ft.

Little River County

C. & M. Drlg. Co.'s No. 1 Strawn, NW cor. SE SW Sec. 17-10-32. T.D. 1,810 ft.; arng. to drill plug; 7-in. csg. cmtd. 1,590 ft.

Lonoke County

Cabot Drlg. Club's No. 1 LeMay, 330 ft. SE cor. SE SW Sec. 26-4n-9w. S.D. 20 ft.

Miller County

W. C. Feazel's No. 1 Heflin, 455 ft. N. 350 ft. E, SW cor. frac. Sec. 17-20-27. Drlg. anhy.&L. 5,614 ft.

Nevada County

Benedum & Trees Oil Co.'s No. 3 Mary Jackson, 150 ft. S, 330 ft. W, NE cor. NW NE NE Sec. 9-14-20. Drlg. 525 ft.; set 10-in. csg. 100 ft.
O. T. Clark's No. 1 T. M. Bemis, 330 ft. NW cor. NW NE Sec. 23-10s-22. R.U. and S.D.

Ouachita County

Liberty Oil Co.'s No. 1 P. T. Hildebrand, 660 ft. S, 330 ft. W NE cor., SE Sec. 28-15-15, O.W.W.O., O.T.D. 4,934 ft. Perf. 2,780-84 ft.; small S.G.; hole full S.W.; W.O.
Sherry O'Brien's No. 2 Cooke est., 330 ft. SE cor. NW SW Sec. 27-15-18. Set 10-in. csg. 100 ft.; drlg. 1,440 ft.

Pulaski County

Coker Oil Corp.'s No. 1 Huffman, 330 ft. NW cor. NW SW SW Sec. 29-4n-11w. 8⅝-in. csg. 206 ft.; S.D. 1,763 ft.

Sevier County

R. A. McArthur's No. 1 Bell est., 20 ft. SE cor. SE SW Sec. 29-9s-32w. Set 12½-in. csg. 100 ft.; Drlg. 520 ft.

Union County—Schuler

Lion Oil Co.'s No. 1 Land, 330 ft. NE cor. SW SE Sec. 13-18-18. R.U.
Lion Oil Ref. Co.'s No. 7-B Morgan, 330 ft. NW cor. W½ SE Sec. 18-18-17. T. Jones sd. 7,546 ft.; T.D. 7,730 ft.; C.O. cond. mud.

Union County—Other

Frank Anthony's No. 1 Jerry, Sec. 21-17-14. Drlg. 2,516 ft.
Barnsdall Oil Co.'s No. 1 Cameron, C SW SW Sec. 36-19-17. Set 13⅜-in. csg. 239 ft. (cor.); set 10¾-in. csg. 2,430 ft.; cd. 4,149-66 ft.; rec. 16 ft. 8 in. hd. sd., sl. odor gas; B. chalk 2,593 ft.; T. Tokio 3,061 ft.; drlg. 4,215 ft.
E. G. Bradham's No. 4-A H. C. McKinney, 306 ft. N, 660 ft. E, SW cor. SW SW Sec. 30-17-15. Hole 120° off; P.B. 2,150 ft.; hole 11° off; abd. and skd. 20 ft. N; set 10-in. csg. 100 ft.; T.D. 2,167 ft.; set 7-in. csg. 2,167 ft.; drlg. in with C.T.
Delta Drlg. Co. et al's No. 1 J. E. Bull, 330 ft. SE cor. SW NW Sec. 6-18-13. Tstd. oil and S.W. in Meakin sd. and oil and mud in Graves sd.; tstg. sat. sd. in Blsm.; tstd. S.W. 2,710-18 ft., set 7-in. csg. 2,730 ft.; perf. 2,583-86 ft.; T.D. 2,730 ft.; swbd. est. 450 B.F., 10% oil; 1,500 ft. O.I.H.; W.O.S.R.
Delta Drlg. Co.'s No. 1 C. T. Grace, C SE SE Sec. 31-12-14. Set 10¾-in. csg. 815 ft.; T. Sur. L. 6,701 ft.; T. por. 6,708 ft.; S.W. 6,712 ft.; tstd. mud, S.W.&S.O. 6,701-27 ft.; T.D. 6,819 ft.; W.O.
Edgar Johnston's No. 1 R. B. Axums, 330 ft. SW cor. SE SW Sec. 31-17-13. T. Meakin sd. 2,530 ft.; D.S.T. 2,528-49 ft. rec. 15 ft. mud slightly cut with oil; T. Granes sd. 2,653 ft.; S.D. 2,659 ft.; W.O.
Lion Oil Ref. Co. No. 9-A Hays, Sec. 4-16-15. O.W.W.O.; O.T.D. 7,255 ft.; P.B. 2,325 ft.; rpd. csg. 2,276-80 ft.; S.O.; pmpd. est. 700 B.P.D. S.W.; S.S.O.; arng. recmt. 2,325 ft.; W.O.C.
Ouachita Union Oil Corp.'s No. 1 Ramsey est., 330 ft. NE cor., SE NW Sec. 26-17-14. Set 10-in. csg. 107 ft.; T.D. 110 ft.
Oil Prod., Inc.'s No. 1 Moore, C SE SE Sec. 1-17s-14w. T. Crain sd. 3,043 ft.; S.D. 3,066 ft.; W.O.

LOUISIANA

N. LOUISIANA WILDCATS

Bossier Parish

Cary & Gibson's No. 2-A Connell, 115 ft. S, 395 ft. W, NE cor. SE SE Sec. 15-10-11. Drlg. sh. 210 ft.
Gulf Ref. Co.'s No. 20 C. B. Hodges, 3,131 ft. N, 1,388 ft. W, SE cor. Sec. 24-16-12. T. Pett. L. 5,298 ft.; T. Travis Pk. 5,590 ft.; C.O.; drlg. sdy. sh. 7,687 ft.
Oils Finance Corp.'s No. 9 Ark. fee, 200 ft. N, 400 ft. W, SE cor. NE SE Sec. 15-19-11. R.U.; S.D.
Premier Inv. Co.'s No. 7-B Kendrick, 150 ft. N, 1,980 ft. W, SE cor. Sec. 22-19-11. D.S.T. 1,029-42 ft.; S.O.&G.; set 9-in. csg. 1,770 ft.; T.D. 1,785 ft.; W. O.C.
Premier Inv. Co.'s No. 7-C Kendrick, 150 ft. N, 585 ft. E, SW cor. SE Sec. 22-19-11. T. sd. 329 ft.; set 10-in. csg. 307 ft.; tstg. 338 ft.
J. B. Stovall's No. 4 Gayoso Co., 1,170 ft. N, 150 ft. E SW cor. Sec. 14-19-11. Drlg. sh. 220 ft.; set 6-in. csg. 102 ft.
Triangle Drlg. Co.'s No. 6-A Herold et al, 332 ft. S, 2,335 ft. E, NW cor. Sec. 13-17-12. Set 8-in. csg. 250 ft.; drlg. sh. 2,610 ft.
Union Prod. Co.'s No. 1-A Herold, 1,326 ft. S, 1,322 ft. W. NE cor. Sec. 29-17-11. Drlg. sh.&L. 3,166 ft.

Caddo Parish

Burnham Drlg. Co.'s No. 2 Wilkinson, 1,650 ft. N, 990 ft. W, SE cor. Sec. 33-22-16. Set 7-in. csg. 2,475 ft.; T.D. 2,495 ft.; W.O.C.
S. H. Cassidy et al's No. 1 Morgan, 1,800 ft. N, 455 ft. W, SE cor. Sec. 2-20-16. R.U.
L. I. Davis' No. 1 Williams, C NW NW Sec. 14-15-15. R.U.; S.D.
T. B. Donnell's No. 1 Surrey Oil Co., 2,970 ft. S, 2,475 ft. W, NE cor. Sec. 12-20-16. Set 7-in. csg. 1,343 ft.; T.D. 1,535 ft.; acdz. with 3,000 gal.; W.O.S.R.
Graham & Lawton's No. 1 Lawton est., 329 ft. W, 330 ft. S NE cor. SW NE Sec. 24-22-16. Drlg. 1,200 ft.
Jones Oil Co.'s No. 1 Pitts, 250 ft. S, 674 ft. W, NE cor. Sec. 24-20-16. Tstd. dry 1,679 ft., S.O.; acdzd. with 3,000 gal.; W.O.
C. C. Lowery's No. 1 Huckaby, 890 ft. S, 990 ft. E, C Sec. 7-20-15. R.U.
P. N. McCullough's No. 4 Hart, 673 ft. N. 620 ft. E, SW cor. Sec. 21-21-16. Set 10-in. csg. 60 ft.; set 6⅝-in. csg. 1,030 ft.; fsg. bailer 1,035 ft.
McElmury & Hamilton's No. 1 Mattson. 591 ft. W, 1,866 ft. S, NE cor. NW Sec. 1-20-16. Set 7-in. 1,329 ft.; T.D. 1,550 ft.; acdz. with 3,000 gal.; W.O S.R.
J. F. Mechem's No. 2 Crystal fee, 400 ft. S, 640 ft. W NE cor. Sec. 14-21-16. Drlg. sh. 700 ft.
J. Ray Murray et al's No. 1 Barfield,

Hoard Exploration Co.

Seismograph Surveys

618 Esperson Bldg.

Houston - - Texas

1,470 ft. SE cor. Sec. 21-21-15. Set 10-in. csg. 80 ft.; drlg. 1,377 ft.

Riggs & Lester's No. 2-A Seybert, 218 ft. N, 4,242 ft. E, C Sec. 17-20-15. Set 5¼-in. 1,338 ft.; T.D. 1,640 ft.; will acd.

Southern Oil & Gas Co., Inc.'s No. 1 Muslow, 1,654 ft. S, 573 ft. W, NE cor. NW Sec. 5-20-15. Set 5½-in. csg. 1,305 ft.

Stanolind O. & G. Co. No. 1, 131 Dillon hrs., C SE NE Sec. 14-21-15. Ran Schmb. 9,109 ft.; T. Smkvr. L. 8,952 ft.; ran Schlum. 10,164 ft.; T. cap rock 10,148 ft.; igneous rock 11,419 ft.; T. salt 10,159 ft.; base salt 11,405 ft.; T.D. 11,419 ft.; P.B. to 9,981 ft. and tstd. mud 7,546-62 ft.; P.B. 9,981 ft.; ripped csg. 7,546-62 ft. and tstd. mud; squeezed and ripped csg. 7,557-64 ft., tstd. 11 jts. salty drlg. mud and slight S.O.; ripped csg. 7,539-55 ft., tstg. 7,539-64 ft.

Stanolind Oil & Gas Co.'s No. 1 Dorian, 220 ft. S, 960 ft. E C Sec. 18-21-15. Cg. 1,600 ft.; set 8⅝-in. csg. 64 ft.

Stanolind O. & G. Co.'s No. 5 Huckaby, 490 ft. N, 990 ft. E, SW cor. SW¼ Sec. 11-21-15. Set 5½-in. csg. 1,527 ft.; T.D. 1,695 ft.; acdz. with 3,000 gal.; tstg.

Temple Oil Co.'s No. 1 Huckaby-Parker, 1,320 ft. N, 330 ft. E, SW cor. SE Sec. 13-22-16. Cg. 2,554 ft.

Texas Co.'s No. 1 Atkins fee, 575 ft. N, 2,918 ft. E, SW cor. NW Sec. 7-20-15. T.D. 1,471 ft.; acdz. with 4,000 gal.; tstg.

Texas Co.'s No. 1 Guy & Richardson, 2,323 ft. N, 1,115 ft. W, SE cor. Sec. 1-20-16. Set 6⅝-in. csg. 1,320 ft.; T.D. 1,345 ft.; W.O.C.

Travis & Red Iron Drlg. Co.'s No. 1 Chandler et al, 819 ft. S, 2,086 ft. E, NW cor. Sec. 5-23-15. Set 9⅝-in. csg. 961 ft.; drlg. anhy.&L. 5,703 ft.

Weaver Oil Corp.'s No. 1 Thornton, 280 ft. S, 307 ft. W, NE cor. NW NE Sec. 24-22-16. Cg. 2,548 ft.

Caldwell Parish

Critchett & Woods (formerly E. T Oakes) No. 1 Kyles, NE cor. SW NW Sec. 18-11-3e. T.D. 4,975 ft.; D.S. stk.; lub. with 100 bbl. oil.

Catahoula Parish

Bell Drlg. Co.'s No. 1 Peck, 698 ft. S, 169 ft. W, NE cor. SW NE Sec. 33-11n-8e. Drlg. sh. 4,950 ft.

Claiborne Parish

Lisbon Explin. Co. No. 1 Roberta Vaughn, 330 ft. N, 660 ft. E, SW cor. NW NE Sec. 36-21-5. O.W.D.D.; O.T.D. 5,313 ft.; recmtd. 7-in. csg. 5,343 ft.; T. Tr. Pk. 5,405 ft.; T. lower Marine form. 7,833 ft.; gas and dist. sd. 8,817-48 ft., hd. and tight; set 5-in. csg. 8,881 ft.; perf. 8,354-83 ft.; D.S.T. 8,354-83 ft.; ¼-in. cks. T.&B.; tstd. S.W. in 37 min.; no pr.; set retainer 8,326 ft. and sqzd.; drld. out and swbg. S.W. in csg.; reset retainer 8,324 ft.; resqueezed 8,354-83 ft.; drld. out to 8,401 ft.; arng. tst.

De Soto Parish

N. W. Hunter's No. 1 Anders-LeBlanc, C NW SE Sec. 5-11-14. Set 10-in. csg. 590 f.; D.ST. 1,954-74 ft.; rec. 150 ft. mud, 25 min.; S.S.O.; drlg. sh.&L. 4,058 ft.

Dewey Jaun's No. 1 Frost Lbr. Ind., 6,600 ft. SE cor. SW Sec. 14-22-3e. S.D. 380 ft.

David Murray's No. 1 Russell, 50 ft. N, 500 ft. W, SE cor. NE NW Sec. 12-11-16. D.S.T. 2,725-36 ft.; rec. 1,000 ft. S.W. in 33 min.; cd. S.W. sd. 2,736-38 ft.; Set 450 ft. 4½-in. csg. 1,520 ft.; T.D. 2,812 ft.; P.B. 1,790 ft. and cmtd. 450 ft. 4½-in. csg. 1,520 ft.; W.O.C.

C. H. Tuttle No. 2-A Wemple, E NW cor. SW¼ Sec. 14-12n-11w. T. bkn. sd. 2,640 ft.; 6⅝-in. csg. 2,557 ft.; tstg. 2,699 ft.; C.O.

La Salle Parish

Georgetown Oil Co.'s No. 3 Baldridge, 660 ft. S, 650 ft. E, NW cor. NE NW Sec. 11-9-1e. Set 5½-in. csg. 1,503 ft.; T.D. 1,509 ft.; W.O.C.

Smith Bros.' No. 1 Kenney, 660 ft. S 150 ft. W, C Sec. 7-10-2e. T. sd. 1,517 ft.; set 8¼-in. csg. 1,517 ft.; T.D. 1,527 ft.; tstg. 1,527 ft.

Morehouse Parish

Union Prod. Co. No. 1-A Tensas-Delta. 1,894 ft. W, 1,584 ft. S, NE cor. SE Sec. 8-22-4. Set 20-in. csg. 125 ft.; 16-in. csg. 712 ft.; set 10¾-in. csg. 2,448 ft.; T. salt 8,114 ft.; drlg. sh. 9,655 ft.

Natchitoches Parish

Jack Lent et al's No. 1 Walker, C NE NE Sec. 9-10-10. 10-in. csg. 63 ft.; reported small S.O. 2,018 ft.; D.S.T. 2,007-18 ft.; rec. 32 jts. S.W.; S.D.

Sabine Parish

Ed Bailey's No. 1 Hale, 330 ft. NW cor. NE NW Sec. 6-7-12. S.D. for wtr. 1,228 ft.

A. R. Chestnut et al's No. 1 Sepulvedo, 990 ft. N, 330 ft. E, SW cor. Sec. 4-7-13. T. clk. 2,022 ft.; set 6-in. csg. 2,027 ft.; acid. with 1,000 gal.; tstd. S.O. 2,205 ft.; drlg. ch. rk. 2,307 ft.

Hunter Co.'s No. 2-B Sabine Lbr. Co., 660 ft. S, 612 ft. W, NE cor. SE SE Sec. 7-7-13. Junked at 2,160 ft.; skdd. 48 ft. E.; drlg. 2,100 ft.

M. Lanza's No. 1 Phares, 330 ft. SE cor. NE SE Sec. 5-5-12. T.D. 2,508 ft.; S.D.; W.O.

N. B. Livingston's No. 1 Bowman Hicks, 660 ft. SE cor. SW Sec. 36-9-14. Set 10-in. csg. 110 ft.; W.O.C.

Major Oil Co.'s No. 8 Bowman Hicks, 25 ft. N, 400 ft. E SW cor., NW SW Sec. 7-7-12. Set 7-in. csg. 2,240 ft.; tstd. S.O.; will acid. 2,525 ft.

A. C. Phillips' No. 1 Frost Lbr. Ind., 330 ft. NE cor. Sec. 34-10-13. Set 6-in. csg. 1,504 ft.; T.D. 1,515 ft.

W. L. Posey No. 1 Rivers, C NW NW Sec. 26-8-13. 6-in. csg. 2,147 ft.; T.D. 2,150 ft.; T. clk. 2,145 ft.; tstd. S.O. and acd. with 3,000 gal.; tstd. S.O. 2,515 ft.; dpnd. and tstg. 2,580 ft.

Relrue Oil Co.'s No. 1 Sabine, SE cor. NE SE Sec. 8-7-13. 6-in. csg. 2,061 ft.; T.D. 3,547 ft.; P.B. 2,350 ft.; tstg. small S.O.&wtr.; S.D.

Claude H. Smith's No. 1 Whitney Corp., 330 ft. N & E C Sec. 24-10-14. R.U.

S. E. Stack's No. 1 Gray, 330 ft. SW cor. Sec. 4-7-13. T. clk. 2,025 ft.; set 7-in. csg. 2,028 ft.; cd. S.W. sd. 2,472 ft.; will P.B.

J. E. Stack's No. 1 Weber, 330 ft. SE cor. SW NE Sec. 8-7-13. Set 10-in. csg. 42 ft.; W.O.C.

Sutton-Zwolle Oil Co.'s No. 3 Sabine, 1,650 ft. S, 660 ft. E, NW cor. NE Sec. 23-7-14. S.D.

Lee Whitehurst's No. 1 Summers, 1,210 ft. N, 440 ft. W, SE cor. NE Sec. 14-7-13. Set 10-in. csg. 62 ft.; W.O.C.

Union Parish

Interstate Nat. Gas Co.'s No. 96 fee, Sec 26-22-3. Set 12½-in. csg. 180 ft.; drlg sh. 750 ft.

Memphis Nat. Gas Co.'s No. 3 Frost Lbr. Ind., Sec. 15-22-3, 8-in. csg. 782 ft.; set 6-in. csg. 2,134 ft.; W.O.C.

Memphis Nat. Gas Co.'s No. 5 Frost Lbr. Ind., Sec. 11-22-3. R.U.

Southern Carbon Co.'s No. 34 Grayling, Sec. 19-22-4. R.U.

United Carbon Co.'s No. 1 McKinney, Sec. 14-22-3. Set 6-in. csg. 2,108 ft.; W.O.C.

United Carbon Co.'s No. 1 Reppond, Sec 14-22-3. Set 8-in. csg. 745 ft.; set 6-in. csg. 2,098 ft.; W.O.C.

We Hope Gas & Oil Co.'s No. 8 Frost Lbr. Ind., Sec. 23-22-3. R.U.

H. L. Woods' No. 1 Union Power, 1,980 ft. E. 660 ft. S. NW cor. Sec. 29-21-3. Set 8-in. csg. 758 ft.; W.O.C.

Webster Parish

Hassie Hunt's No. 1 Holloway-Davis, 560 ft. N, 660 ft. W, C Sec. 23-21-10. R.U.

Hunt Oil Co.'s No. 3 Stewart, C NE NW Sec. 29-21-10. Drlg. sdy. sh. 6,956 ft.

Hunt Oil Co.'s No. 4 Stewart, 480 ft. S, 835 ft. E, NW cor. SW Sec. 32-21-10. Drlg. sdy. sh. 6,770 ft.

Oliphant Oil Co.'s No. 2 Banks, 410 ft. S, 660 ft. E, NW cor. Sec. 2-20-10. Set 9⅝-in. csg. 5,611 ft.; T.C.V. 8,073 ft.; drlg. sh. 8,385 ft.

Quad Oil Corp.'s No. 2 Bodcaw, Sec. 15-21-10. O.W.D.D.; O.T.D. 4,732 ft.; set whpstk. 4,378 ft.; drlg. L.&sh. 5,095 ft.

Stanolind O. & G. Co.'s No. 4 Pardee, 660 ft. SE cor. Sec. 25-21-10. T. Tr. Pk. 5,829 ft.; 9⅝-in. csg. 5,950 ft.; drlg. 5,829 ft.; 9⅝-in. csg. 5,950 ft.; 9⅝-in. csg. 5,863 ft.; hole off 4°, whpstk. 6,989 ft.; set 2nd whpstk. 7,258 ft.; drlg. sh.&sd. 7,790 ft.

Woodley Pet. Co.'s No. 2 Couch, 810 ft. S, 510 ft. W, NE cor. SW Sec. 35-21-10. 13⅜-in. csg. 683 ft.; set 9⅝-in. csg. 5,775 ft.; drlg. hd. sdy. sh. 7,885 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 David Meaux, Sec. 9-12s-3e. T.D. 11,359 ft.; T. gas sd. 11,318 ft.; D.S. stk.; P.B. and sidetracked; drlg. 8,570 ft.

Continental Oil Co. No. 1 Franciol, Sec. 67-12s-3e. Drk.

Continental Oil Co.'s No. 1 Motty, Sec. 18-12s-3e. R.U.

Stanolind O. & G. Co.'s No. 1 Lebocut, Sec. 33-12s-3e. T.D. 8,312 ft.; sdtrkd. 6,134 ft.; T.D. 7,768 ft.; abd.

Bancroft—Beauregard Parish

Republic Prod. Co.'s No. 1 J. A. Whitman, Sec. 15-6s-13w. T.D. 7,321 ft.

Republic Prod. Co.'s No. 1-B Whitman, Sec. 15-6s-13w. T.D. 7,332 ft.; 5½-in. csg. 7,332 ft.; I.P. 233 B.P.D.; ¼-in. ck.

Republic Prod. Co.'s No. 3 L. Whitman, Sec. 15-6s-13w. T.D. 7,662 ft.; 5½-in. csg. 7,662 ft.

Bateman Lake—St. Mary Parish

Texas Co. No. 1 St. Mary Parish Sch Bd., Sec. 16-16s-12e. Gas sd. 11,169-79 ft.; cd. sd. dist. cut 11,516-19 ft.; T.D. 11,589 ft.; 7-in. csg. 11,579 ft.; perf. csg. 10,663-83 ft.; tstd. dry gas.

Texas Co.'s No. 3 State, Sec. 16s-12e. Loc.

Texas Co.'s No. 3 Way Bayou, Sec. 21 16s-12e. Loc.

Baton Rouge—East Baton Rouge Parish

W. V. Bowles et al's No. 3 University Hills, Sec. 68-7s-1w. T.D.; 6,508 ft.; perf. csg. 6,494-6,506 ft.; I.P. 336 B. P.D.; 5/32-in. ck.

Guaranty Oil Co. No. 2 Morgan, Sec. 65-7s-1w. T.D. 6,530 ft.; 5½-in. csg. 6,450 ft.; swbd. S.W.; S.D.

Wm. Helis' No. 6 Nelson, Sec. 36-7s-1w. 10¾-in. csg. 2,060 ft.

T. G. Markley et al's No. 2 Knox Amiss, Sec. 67-7s-1w. T.D. 6,486 ft.; 7-in. 6,476 ft.

Bay St. Elaine—Terrebonne Parish

Texas Co.'s No. 3 L.L.&E., Sec. 18-22s-18e. Loc.

Bayou Choctaw—Iberville Parish

Standard Oil Co. of La.'s No. 12 Wilbert, Sec. 53-9s-11e. Drlg. sh. 1,812 ft.

Bayou Des Allemand—La Fourche Parish

Amerada Pet. Corp.'s No. 3 Gheens, Sec. 56-15s-20e. Bldg. drk.

Bayou des Glaise—Iberville Parish

Humble O. & R. Co. No. 1-B Wilbert, Sec. 78-8s-8e. T.D. 3,025 ft.; 13⅜-in. csg. 3,000 ft.; T. salt 4,101 ft.; T.D. 4,182 ft.; S.D.

Humble O. & R. Co.'s No. 2-B Wilberts, Sec. 78-8s-8e. Loc.

Black Bayou—Cameron Parish

Shell Oil Co., Inc.'s No. 43 Watkins, Sec. 7-12s-12w. Drlg. L. 5,265 ft.

Caillou Island—Terrebonne Parish

Texas Co.'s No. 12 State, Sec. 20-23s-20e. T.D. 4,982 ft.; sdtrkd.; T. salt 6,228 ft.; T.D. 6,236 ft.; P.B. 5,006 ft.; sdtrk.; drlg. sh. 5,195 ft.

Chacahoula—La Fourche Parish

Sun Oil Co. No. 1 Cypress, Sec. 75-15s-15e. 13⅜-in. csg. 1,842 ft.; T. salt 6,072 ft.; T.D. 6,088 ft.; P.B. 2,100 ft.; sdtrkd.; T.D. 6,553 ft.; fsg.; sdtrkd.; T.D. 5,544 ft.; P.B. to sdtrk.

Sun Oil Co.'s No. 6 Dibert, Stark & Brown, Sec. 70-15s-15e. Drlg. sh. 2,312 ft.

Sun Oil Co. No. 2 Dodge Sunberry, Sec. 65-15s-15e. S.D. 4,259 ft.; T.A.

Chalkley Field—Cameron Parish

Humble O. & R. Co.'s No. 1 Cameron Sch. Bd., Sec. 16-12s-6w. Loc.

Humble O. & R. Co.'s No. 5 K. B. Hanzen, Sec. 9-12s-6w. Drlg. sh. 7,145 ft.

Shell Oil Co., Inc.'s No. 5 Hanzen, Sec. 21-12s-6w. Drlg. sh. 4,887 ft.

Charenton—St. Mary Parish

Pan American Prod. Co.'s No. 3-A H. Ecuer, Sec. 11-13s-9e. T.D. 2,464 ft.; 7-in. csg. 2,456 ft.; I.P. 125 bbl. fluid, 70% wtr.; gas lift.

Pan American Prod. Co.'s No. 17 Laws Realty Co., Sec. 31-13s-10e. T.D. 7,208 ft.; 5½-in. csg. 7,208 ft.

Pan American Prod. Co.'s No. 6 South Coast Corp., Sec. 31-13s-10e. T.D. 7,189 ft.; 5½-in. csg. 7,182 ft.; tstg.

Cheneyville—Rapides Parish

Amerada Pet. Corp.'s No. 7 Well Co., Sec. 54-1s-2e. T. sd. 5,710 ft.; T.D. 5,814 ft.; 5½-in. csg. 5,814 ft.; perf. csg. 5,710-32 ft.; tstg.

S. W. Richardson's No. 6 Well, Sec. 53-1s-2e. Drlg. sh.&L. 4,956 ft.

Creole—Cameron Parish

Superior Oil Co.'s No. 9 State, Gulf of Mex., Twp. 15s-8w. T.D. 5,589 ft.; sidetracked; drlg. sh.&L. 5,097 ft.

Darrow—Ascension Parish

Humble O. & R. Co.'s No. 27 Community, Sec. 30-10s-2e. T.D. 4,745 ft.; perf. csg. 4,685-4,700 ft.; I.P. 243 B. P.D.; 5/32-in. ck.

Humble O. & R. Co.'s No. 17 Gumbel, Sec. 36-10s-2e. Drk.

Kiva Oil Co. No. 1 Duplessis, Sec. 69-10s-2w. S.D. 2,523 ft.

Dog Lake—Terrebonne Parish

Texas Co.'s No. 10 State, Sec. 1-22s-15e. Loc.

Texas Co. No. 23 State, Sec. 5-22s-16e. T.D. 7,429 ft.; P.B.; sdtrkd.; T.D. 6,105 ft.; P.B.; sdtrkd.; T.D. 7,429 ft.; 7-in. csg. 6,871 ft.; cg. sh. 7,020 ft.

Edgerly—Calcasieu Parish

Sutton-Burton Joint Acct.'s No. 1 J. H. Embry, Sec. 29-9s-11w. Drlg. sh. 3,020 ft.

Eola—Avoyelles Parish

Amerada Pet. Corp.'s No. 1 Avoyelles Bnk., Sec. 5-2s-3e. Drlg. sh. 8,210 ft.

Amerada Pet. Corp.'s No. 1 Dent, Sec. 10-2s-2e. Drlg. 1,512 ft.

Amerada Pet. Corp.'s No. 1 L. B. Dent, Sec. 10-2s-2e. R.U.

Amerada Pet. Corp.'s No. 5 Glaze, Sec. 6-2s-3e. Drlg. sh. 5,820 ft.

Amerada Pet. Corp.'s No. 3 Irion, Sec. 6-2s-3e. R.U.

Amerada Pet. Corp.'s No. 7 Marchive, Sec. 6-2s-3e. T.D. 8,559 ft.; 5½-in. csg. 8,558 ft.

Amerada Pet. Corp.'s No. 1 White et al, Sec. 7-2s-3e. T.D. 8,558 ft.; 5½-in. csg. 8,557 ft.; perf. csg. 8,430-8,530 ft.; I.P. 672 B.P.D.; ¼-in. ck.

W. C. Feazel et al's No. 1 R. Z. Sclater, Sec. 1-2s-2e. Drlg. sh. 7,260 ft.

G. W. Kenedy's No. 1 R. R. Irion, Sec. 1-2s-2e. Drlg. sh. 7,412 ft.

S. W. Richardson's No. 7 Haas Inv. Co., Sec. 7-2s-3e. T.D. 8,520 ft.; 5½-in. csg. 8,599 ft.

Sun Oil Co.'s No. 2 Townsend, Sec. 8-2s 3e. Drlg. sh. 6,527 ft.

Fausse Point—Iberia Parish

Texas Co.'s No. 6 State, Twp. 11s-8e 13⅜-in. csg. 1,407 ft.; T. salt 5,408 ft.; T.D. 5,415 ft.; 7-in. csg. 5,314 ft.; perf. csg. 5,177-87 ft.; made squeeze job.

Gordon Island—Plaquemines Parish

Texas Co.'s No. 38 State, Sec. 38-23s-33e. Drlg. sh.&L. 2,860 ft.

Texas Co.'s No. 39 State, Sec. 38-23s-33e. Drlg. sdy. sh. 5,631 ft.

Golden Meadow—La Fourche Parish

Bateman Drlg. Co.'s No. 1 Harry Louviere, Sec. 9-19s-22e. S.D. 5,560 ft.

Bennett Oil Co.'s No. 3 Cheramie, Sec. 12-19s-22e. Drlg. sdy. sh. 5,911 ft.

Berkshire Oil Co.'s No. 8 Nicol, Sec. 9-19s-22e. Drlg. sh. 4,810 ft.

Berkshire Oil Co.'s No. 9 Nicol, Sec. 9-19s-22e. T.D. 2,659 ft.; perf. csg. 2,650-56 ft.; I.P. 179 B.P.D.; ¼-in. ck.

Boller & Rutledge's No. 1 Burger Cheramie, Sec. 12-19s-22e. 10¾-in. csg. 803 ft.; T.D. 5,502 ft.; perf. csg. 5,457-62 ft.; I.P. 161 B.P.D.; 7/64-in. ck.

Brown & Woods' No. 1 S. Hogan, Sec. 9-19s-22e. T.D. 2,710 ft.; P.B. to 1,500 ft.; sdtrkd.; T.D. 2,672 ft.; 7-in. csg. on bttm.; perf. csg. 2,655-64 ft.; would not flow; pull screen.

Peter Cioban's No 1 Nat Alario, Sec. 2 19s-22e. Drlg. sh. 1,930 ft.

Taylor Fithian's No. 1 Cheramie, Sec. 12-19s-22e. Drk.

Taylor Fithian's No. 1 Orgeron, Sec. 2-19s-22e. 10¾-in. csg. 103 ft.; T.D. 2,792 ft.; 5½-in. csg. 2,680 ft.

Golden Meadows Oil Co.'s No. 1 Whitney Rebstock, Sec. 2-19s-22e. Drk.

Wm. Helis' No. 3 Gaspard, Sec. 9-19s-22e. T.D. 2,664 ft.; 6-in. csg. 2,655 ft.

Jim McMurrey's No. 1 P. Collins, Sec. 12-19s-22e. Drlg. sh. 2,218 ft.

Martex Oil Co.'s No. 1 Rebstock, Sec. 2-19s-22e. Loc. abd.

M. H. Marr & Vaughn's No. 2 Adam Terrebonne, Sec. 9-19s-22e. T.D. 8,945 ft.; run 7-in. csg.

S. Rhodes Drlg. Co.'s No. 1 Falgout Holding Co., Sec. 12-19s-22e. T.D. 5,498 ft.; 7-in. csg. 5,498 ft.; perf. csg. 5,185-95 ft.; swab. S.W.

Terouche Oil Co.'s No. 2 Cheramie, Sec. 12-19s-22e. Drk.

Texas Co.'s No. 4 Falgout Holding Co., Sec. 9-19s-22e. Drlg. sh. 2,013 ft.

Texas Co.'s No. 5 Falgout Holding Co., Sec. 9-19s-22e. T.D. 2,700 ft.; 7-in. csg. 2,700 ft.; perf. csg. 2,645-60 ft.; I.P. 116 bbl. oil; ¼-in. ck.

Texas Co.'s No. 6 Falgout Holding, Sec. 9-19s-22e. R.U.

Texas Co.'s No. 4 L.L.&E., Golden Meadow, Sec. 78-19s-22e. T.D. 5,370 ft.; 7-in. csg. 5,370 ft.; perf. csg. 5,318-30 ft.; tstd. S.W.

Texas Co.'s No. 6 L.L.&E.-Golden Meadows, Sec. 78-19s-21e. 10¾-in. csg. 573 ft.; T.D. 5,436 ft.; 7-in. csg. 5,374 ft.; perf. csg. 5,304-22 ft.; swab. dry.; reperf. csg. 5,305-23 ft.

Texas Co. No. 3 State-Catfish Lake, Sec 76-19s-21e. T.D. 3,509 ft.; 7-in. csg. 2,805 ft.; perf. csg. 2,740-62 ft.; pumped dry; S.D.

Texas Co.'s No. 4 State-Catfish, Sec. 3-20s-21e. T.D.; 2,785 ft.; abd.

Texas Co.'s No. 5 State-Catfish, Sec. 3-20s-21e. Drlg. sd. 2,722 ft.

Grand Bay—Plaquemines Parish

Gulf Oil Corp.'s No. 5-A Grand Prairie, Sec. 31-19s-19e. T.D. 8,085 ft.; run 9⅝-in. csg.; comp.; no ga.

Gulf Oil Corp. No. 6-A Grand Prairie Lv. Dist., Sec. 17-20s-10e. Drlg. sdy. sh. 10,438 ft.

Gulf Oil Corp.'s No. 7-A Grand Prairie Lv. Dist., Sec. 5-20s-19e. Loc.

Gulf Oil Corp.'s No. 8-A Grand Prairie Dist., Sec. 5-20s-19e. Loc.

Gulf Oil Corp.'s No. 4 State, Sec. 20-19s-19e. Loc.

Texas Co. No. 1 State-Lookout Pass, Sec 48-20s-18e. Loc.

Grand Lake—Cameron Parish

Amerada Pet. Corp.'s No. 2 Mallard Bay, Twp. 15s-4w. 10¾-in. csg. 1,317 ft.; T.D. 7,949 ft.; surf. csg. parted.

Superior Oil Co.'s No. 5 State, Twp. 13s-4w. Loc.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 25-A Erwin, Sec. 13-12s-10w. Drk.

Stanolind O. & G. Co.'s No. 20 Cameron Par. Sch. Ld., Sec. 16-12s-10w. Drlg. sh.&L. 6,310 ft.

Stanolind O. & G. Co.'s No. 29-B Gulf Ld., Sec. 14-12s-10w. Drlg. sh. 2,027 ft.

Stanolind O. & G. Co.'s No. 30-B Gulf Ld., Sec. 31-12s-10w. T.D. 7,225 ft.; P. B. 4,800 ft.; sdtrkd.; drlg. sh.&L. 6,412 ft.

Superior Oil Co.'s No. 8 Benson-Vincent, Sec. 30-12s-10w. Drlg. 2,012 ft.

Texas Co.'s No. 29-B State, Twp. 12s-9w. Spd.

Union Sulphur Co.'s No. 1 Simon Doiron Sec. 37-12s-10w. T.D. 7,274 ft.; 7-in. csg. 7,274 ft.; tstg.

Horseshoe Bayou—St. Mary Parish

Texas Co.'s No. 3 State, Sec. 40-17s-9e T. sd. 11,311 ft.; drlg. sh.&L. 11,641 ft.

Jeanerette—St. Mary Parish

Continental Oil Co.'s No. 1 Leon De Mary, Sec. 17-12s-3e. Loc.

Herton Oil Co.'s No. 6 Roane, Sec. 38-13s-9e. Drlg. sh. 10,229 ft.

Jefferson Island—Iberia Parish

Texas Co.'s No. 4 Jefferson Island Salt, Sec. 58-12s-5e. Drlg. sdy. sh. 1,447 ft.

Texas Co.'s No. 3 State, Twp. 12s-5e. Driving piling.

Jennings—Acadia Parish

Glassell-Glassell No. 8 Trusher, Sec. 47-9s-2w. T.D. 9,085 ft.; drill stem stuck.

Gulf Oil Corp.'s No. 42 Arnaudet, Sec. 47-9s-2w. Drlg. sh. 5,310 ft.

Port City Oil Co.'s No. 25 Synd., Sec. 41-9s-2w. Drlg. sh. 2,810 ft.

Shell Oil Co., Inc.'s No. 8 Community. T.D. 7,133 ft.

Stanolind O. & G. Co.'s No. 116 Crowley O. & M. Co., Sec. 48-9s-2w. Drlg. sh. 3,312 ft.

Lafitte—Jefferson Parish

Texas Co. No. 14 Lafitte, Sec. 20-17s-24e. T.D. 4,599 ft.; P.B. 3,404 ft.: sdtrkd.; drlg. sdy. sh. 8,210 ft.
Texas Co.'s No. 5 Madison Realty Co., Sec. 17-17s-24e. 10¾-in. csg. 1,876 ft.
Texas Co.'s No. 4 Marrero, Sec. 21-17s-24e. Drlg. sh.&L. 8,998 ft.

Lake Long—La Fourche Parish

Fohs Oil Co.'s No. 11 State, Twp. 17s-19e. 10¾-in. csg. 2,034 ft.; T.D. 10,197 ft.; 7-in. csg. 9,865 ft.

Lake Pelto—Terrebonne Parish

Texas Co.'s No. 28 State, Sec. 7-23s-18e. T.D. 5,752 ft., salt; P.B. to sdtrk.; drlg. 4,812 ft.

La Pice—St. James Parish

Shell Oil Co., Inc.'s No. 1 Lebermuth & Israel. Cg. sdy. L. 10,259 ft.

Leeville—Plaquemines Parish

Texas Co.'s No. 72 L.L.&E., Sec. 27-21s-22e. T.D. 5,041 ft.; sdtrkd.; T. salt 6,854 ft.; T.D. 6,866 ft.; 7-in. csg. 6,822 ft.; perf. csg. 6,735-75 ft.; tstd. oil and S.W.; perf. csg. 6,110-75 ft.

New Iberia—Iberia Parish

Wm. Helis' No. 10 Bolivar, Sec. 56-12s-7e. Drlg. sh. 890 ft.
Wm. Helis' No. 7 Sabatier, Sec. 54-12s-7e. 7-in. csg. 2,205 ft.; T.D. 3,090 ft.; P.B. 2,995 ft.; 5½-in. csg. 3,010 ft.; perf. csg. 2,872-82 ft.
Wm. Helis No. 7 J. E. Schwing, Sec. 54-12s-7e. T.D. 8,850 ft.; P.B. 7,840 ft.: T.D. 8,850 ft.; P.B. 8,025 ft.; went back into old hole; P.B. and sdtrk.; T.D. 7,443 ft.; D.S. stuck.
J. J. Hooper's No. 1 Marston, Sec. 51-12s-7e. T.D. 902 ft.; 5½-in. csg. 875 ft.; I.P. 50 B.P.D.; ⅞-in. ck.
Texas Co. No. 2 Bryant, Sec. 25-12s-7e R.U.
Texas Co.'s No. 13 Duke, Sec. 26-12s-7e Drlg. sh. 836 ft.
Texas Co.'s No. 1 Polk Hebert, Sec. 25-12s-7e. Drlg. sh. 6,790 ft.
Texas Co.'s No. 3 Schwing, Sec. 71-12s-7e. Drlg. sh.&L. 9,078 ft.
Texas Co.'s No. 1 H. Perry Walet, Sec. 2-12s-7e. Drlg. sh. 1,926 ft.

North Crowley—Acadia Parish

Humble O. & R. Co.'s No. 2 Davis, Sec. 44-8s-1e. T.D. 8,204 ft.; perf. csg. 8,198-8,201 ft.; flowed 39 bbl. oil P.D.
Humble O. & R. Co.'s No. 5 Habetz, Sec. 45-8s-1e. T.D. 8,226 ft.; 5½-in. csg. 5,534 ft.; perf. csg. 5,307-24 ft.; S.W.; abd.
Humble O. & R. Co.'s No. 6 Ohlenforst, Sec. 34-8s-1e. Loc.
Humble O. & R. Co.'s No. 2 Thevis, Sec. 34-8s-1e. Drlg. sh. 4,020 ft.

North Elton—Allen Parish

Stanolind O. & G. Co.'s No. 1 G. W. Jenkins, Sec. 23-6s-3w. T.D. 7,760 ft.: run csg.

Paradis—St. Charles Parish

Texas Co. No. 2 L.L.&E. Paradis, Sec 6-14s-20e. Cd. sd., dist. odor 10,085-85 ft.; 7-in. csg. 10,497 ft.; T.D. 11,170 ft.; perf. csg. 10,295-10,340 ft.; I.P. 17 B. P.H.; ⅝-in. ck.

Perkins—Calcasieu Parish

Humble O. & R. Co.'s No. 3 Edgewood Ld. & Lgng. Co., Sec. 5-8s-10w. Spud.

Plumb Bob—St. Martin Parish

Texas Co.'s No. 13 St. Martin Ld. Co., Sec. 21-8s-7e. Dredge canal.

Port Barre—St. Landry Parish

Gulf Oil Corp.'s No. 17 Wilson-Broach, Sec. 4-6s-5e. Drlg. sd.&sh. 4,474 ft.
McDannald Oil Co.'s No. 2 Tutral, Sec. 20-6s-5e. Bldg. rd.
Pan American Prod. Co.'s No. 4 Cormier, Sec. 4-6s-5e. T.D. 5,425 ft.; P.B.; sidetracked; T. D. 4,926 ft.; 5-in. csg. 4,914 ft.; I.P. 596 B.P.D.; ¼-in. ck.
Pan American Prod. Co.'s No. 5 Garland, Sec. 4-6s-5e. T.D. 5,080 ft.; 5½-in. csg. 5,064 ft.
T. D. Spill No. 1 Gaudet, Sec. 4-6s-5e S.D. 4,700 ft.

Potash—Plaquemines Parish

Humble O. & R. Co.'s No. 41 Orleans, Sec. 14-18s-15e. Drlg. sd. 4,430 ft.

Quarantine Bay—Plaquemines Parish

Gulf Oil Corp.'s No. 3-A Plaquemines Ld. Co., Sec. 7-19s-17e. T.D. 8,178 ft.; make D.S.T.
Gulf Oil Corp. No. 9 State QQ, Sec. 18-19s-17e. Loc.
Gulf Oil Corp.'s No. 14 State, Sec. 7-19s-17e. Drlg. sh. 4,312 ft.

Sorrento—Ascension Parish

Sorrento Synd. No. 1 L. L. Bernard Sec. 27-10s-4e. S.D. 8,004 ft.; P.B. to sdtrk.

South Houma—Terrebonne Parish

Shell Oil Co., Inc.'s No. 4 Peters, Sec. 72-18s-18e. T.D. 10,430 ft.; rmg.

South Jennings—Jeff Davis Parish

Stanolind O. & G. Co.'s No. 1 Doherty, Sec. 15-10s-3w. Drlg. sh. 9,610 ft.

Starks—Calcasieu Parish

W. T. Burton's No. 1 Industrial Lbr. Co., Sec. 29-9s-1w. Drlg. sh. 6,163 ft.

Valentine—La Fourche Parish

Wm. Helis' No. 5 Valentine Sugars, Inc., Sec. 2-17s-20e. 10¾-in. csg. 1,632 ft.; T.D. 7,845 ft.; P.B. 6,965 ft.; 7-in. csg. 6,590 ft.; tstd. oil&S.W.; made squeeze job; retstg.
Pan American Prod. Co.'s No. 3-A Community, Sec. 10-17s-20e. Drlg. sh. 9,810 ft.

Venice—Plaquemines Parish

Tide Water Asso. Oil Co.'s No. 6 Buras Lv. Bd., Sec. 35-21s-30e. Driv. piling.
Tide Water Asso. Oil Co.'s No. 6 Buras Lv. Bd., Sec. 27-21s-30e. T.D. 10,475 ft.; tstg.

Villa Platte—Evangeline Parish

Continental Oil Co.'s No. 2 Attales, Sec. 45-3s-2e. Cg. 9,000 ft.
Continental Oil Co.'s No. 2 Deshotels, Sec. 44-3s-2e. Drlg. sd.&sh. 2,312 ft.
Continental Oil Co.'s No. 4 Hattie Haas, Sec. 44-3s-2e. Drlg. sh. 7,026 ft.
Continental Oil Co.'s No. 4 Hirsch, Sec. 44s-3s-2e. T.D. 9,062 ft.; I.P. 257 B. P.D.; ⅞-in. ck.
Continental Oil Co.'s No. 4 Martha Haas, Sec. 44-3s-2e. Drlg. sh. 7,210 ft.
Continental Oil Co.'s No. 2 Phillip Fontenot, Sec. 44-3s-2e. T.D. 9,084 ft.; run csg.
Continental Oil Co.'s No. 2 W. L. Tate, Sec. 40-4s-2e. Drlg. sh. 4,620 ft.
Continental Oil Co.'s No. 1 T. E. Vidrine, Sec. 48-3s-2e. R.U.

West Gueydan—Vermilion Parish

Magnolia Pet. Co.'s No. 1 Zwan, Sec. 6-12s-2w. T.D. 7,345 ft.; abd.

West Lake Verret—St. Mary Parish

Shell Oil Co., Inc.'s No. 4 Jeanerette Drlg. sdy. sh.&sh. 5,742 ft.

White Castle—Iberville Parish

Shell Oil Co., Inc.'s No. 1 Baist. T.D. 6,449 ft., salt; P.B. 6,361 ft.; flowed 141 bbl. in 8 hrs; 12/64-in. ck.

Woodlawn—Jeff Davis Parish

Union Sulphur Co. No. 1 Raymond Hebert, Sec. 6-9s-5w. 7-in. csg. 9,575 ft.; drlg. sh.&L. 10,387 ft.
Union Sulphur Co.'s No. 1 E. A. Norton, Sec. 12-9s-5w. Drlg. sh. 8,466 ft.
Union Sulphur Co. No. 3 Mrs. O'Miller Sec. 7-9s-5w. T.D. 8,867 ft.; 7-in. csg. 8,867 ft.
Woodlawn Oil Corp.'s No. 1 Hebert, Sec. 1-9s-6w. Cg. 9,200 ft.

S. LOUISIANA WILDCATS

Acadia Parish

Tri Parish Drillers, Inc., No. 1 Paul Stag, Sec. 4-7s-1w. M.I. rig.

Allen Parish

Housh & Thompson's No. 1 Ind. Lbr. Co., Sec. 1-4s-5w. R.U.

Assumption Parish

Shell Oil Co., Inc.'s No. 1 C. S. Eellis. Sec. 9-16s-14e. Cg. sh. 8,894 ft.

Avoyelles Parish

Joe F. Beit's No. 1 Thompson & Katz, Sec. 23-2n-5e. R.U.

Beauregard Parish

Atlantic Ref. Co. No. 1 Lutcher Moore. Sec. 22-3s-11w. Loc.
Atlantic Ref. Co. No. 1 Rice Ld. & Lbr Co., Sec. 22-3s-11w. Loc.
California Co.'s No. 2 Long Bell Lbr Co., Sec. 12-5s-10w. T.D. 10,055 ft.; fsg.
Republic Prod. Co.'s No. 9 Lutcher Moore Lbr. Co., Sec. 1-7s-12w. S.D. 9,145 ft.

Calcasieu Parish

C. L. Arnette's No. 1 Arthur Welch, Sec. 19-10s-12w. 10¾-in. csg. 130 ft.; T.D. 395 ft.; S.D.

Cameron Parish

Humble O. & R. Co.'s No. 1 F. J. Pavell, Sec. 5-15s-14w. T.D. 7,517 ft.; abd.
Phillips Pet. Co.'s No. 1 Miami Corp., Sec. 11-14s-6w. Spd.

East Baton Rouge Parish

Farris & Golding Drlg. Co.'s No. 1 D. E McEnnis, Sec. 58-7s-1e. 20-in. csg. 42 ft.; 10¾-in. csg. 1,747 ft.; drlg. sh. 7,324 ft.

Iberia Parish

Plymouth Oil Co. et al's No. 1 Lynch McHugh, Sec. 13-12s-10e. 10¾-in. csg. 2,519 ft.; drlg. sh. 5,680 ft.

Jefferson Parish

Continental Oil Co. No. 1 Bernstein, Sec. 2-16s-23e. Drlg. sh. 11,863 ft.

Lafayette Parish

Stanolind O. & G. Co.'s No. 1 Lacaze Billeaud et al, Sec. 35-10s-5e. T.D. 11,003 ft.; abd.

La Fourche Parish

Tide Water Asso. Oil Co. No. 1 Delta Farms, Inc., Sec. 6-17s-23e. T.D. 10,576 ft.; fsg.

Orleans Parish

W. T. Burton No. 1 L.&N.R.R., Sec. 18-11s-15e. T.D. 10,394 ft.; 5½-in. csg. 10,274 ft.; S.D.

Plaquemines Parish

Gulf Oil Corp.'s No. 1-D Buras Lv. Dist., Sec. 6-23s-31e. Drlg. sh. 1,791 ft.

Rapides Parish

Rantex Pet. Corp.'s No. 1 Mathews, Sec 6-1n-1e. R.U.

St. Bernard Parish

Gulf Ref. Co. No. 4-State-R.R. (Lake Borgne), Twp. 12s-15e. 9⅝-in. csg. 8,161 ft.; T.D. 10,632 ft.; P.B. 9,700 ft.; rmd. to 9,658 ft.; lost core bbl.; P.B. sdtrkd. 8,912 ft.; T.D. 10,528 ft.; 7-in. csg. 10,494 ft.; hole cleaned, wash to bottom.

St. John the Baptist Parish

Pan American Prod. Co. No. 1 Mill, Sec. 12-11s-7e (LaPlace prospect). 10¾-in. csg. 2,837 ft.; T.D. 8,896 ft.; D.S.T. 8,870-96 ft.; tstd. 600 lb. W.P.; rec. 10 gal. dist.; T.D. 10,175 ft.; P.B. 10,043 ft.; prep. to perf. csg.; 7-in. csg. 10,120 ft.; perf. csg. 10,000-25 ft.; gas&S.W.; perf. csg. 8,115-22 ft.; I.P. 133 bbl. 61.3-grav. dist. P.D.; ¼-in. bottom-hole ck. and ½-in. sur. ck.; T.P. 725 lb.; C.P. 650 lb.

St. Martin Parish

Wm. Helis' No. 2 Levert Plantation, Sec. 33-9s-7e. Drlg. sdy. sh. 7,558 ft.
Shell Oil Co., Inc., No. 1 Iberville La. Co., Sec. 86-8s-7e. T.D. 10,000 ft.; 5-in. csg. 9,819 ft.; perf. csg. 9,745-58 ft.; 40 holes; flwd. at rate of 1,013 B.P. D.; ¾-in. ck.; T.P. 1,875 lb.; C.P. 1,925 lb.
Wm. Helis' No. 1 Rycade Oil Co., Sec. 33-9s-7e. Drlg. sd.&sh. 7,658 ft.

St. Mary Parish

Perry S. Cooney No. 1 A. W. Allain, Sec. 46-13s-9e. S.D. 2,600 ft.
Texas Co.'s No. 1 State West Cote Blanche Bay, Twp. 16s-7e. Loc.

Terrebonne Parish

Barnsdall Oil Co.'s No. 1 Nelson, Sec. 2-21s-11e. 10¾-in. csg. 2,767 ft.
Continental Oil Co. et al's No. 1 Peters, Sec. 32-19s-15e. 13⅜-in. csg. 1,987 ft.; drlg. sd. 10,862 ft.

Vermilion Parish

La. Ld. & Explo. Co.'s No. 3 La. Fur Co., Sec. 9-15s-1e. T.D. 8,900 ft.
Texas Co.'s No. 1 Vermilion Par. Sch. Bd., Sec. 16-13s-4e. Drlg. sh. 8,107 ft.

TEXAS

Week Ended December 2

GULF COAST FIELDS

Anchor—Brazoria County

Humble O. & R. Co.'s No. 1 M. W. Mettler, J. de Jesus Valderas Sur. 13⅜-in. csg. 944 ft.; 9⅝-in. csg. 7,139 ft.; T.D. 10,144 ft.; taking side-wall cores.
Glenn McCarthy's No. 1 Ida M. Salmon and John Muma, Geo. Robinson Sur 9⅝-in. csg. 6,860 ft.; T. Frio 8,820 ft.; drlg. sdy. sh. 10,270 ft.

Old Ocean—Brazoria County

Harrison-Abercrombie's No. 7 Armstrong, Polly & Chance Sur. Drlg. sd. &sh. 10,065 ft.
Harrison & Abercrombie's No. 7 Bernard River Ld. Dev. Co., C. Breen Sur. T.D. 5,966 ft.; fsg.
Harrison & Abercrombie's No. 1 Berthelsen, C. Breen Sur. T.D. 10,392 ft.; 7-in. csg. 10,392 ft.
Stanolind O. & G. Co.'s No. 1 Giles, C. Breen Sur. Drlg. sh.&sd. 4,327 ft.
Sun Oil Co.'s No. 3 Borsodi, C. Breen Sur. 13⅜-in. csg. 1,515 ft.; drlg. sh. &L. 6,580 ft.
Sun Oil Co.'s No. 3 Campbell, C. Breen Sur. 13⅜-in. csg. 1,506 ft.; 9⅝-in. csg. 7,008 ft.; drlg. sd.&sh. 9,637 ft.

Cedar Point—Chambers County

Standard Oil Co. of Texas' No. 55-119 State. 10¾-in. csg. 1,607 ft.; T.D. 6,250 ft., S.W. sd.; P.B.; 7-in. csg. 3,678 ft.; perf. csg. 3,580-86 ft.; test S.W.

Seabreeze—Chambers County

Sun Oil Co. No. 2 Hoffman, T.&N.O. Sur No. 131. T.D. 8,400 ft.; W.O.C.

Turtle Bay—Chambers County

Stanolind O. & G. Co.'s No. 2 State, Tr. 39. 16-in. csg. 115 ft.; drlg. sh.&sd. 6,650 ft.

Garwood—Colorado County

Davis & Co., Inc., No. 1 J. R. McLane. I.&G.N. Sur. 41. T.D. 9,780 ft.; D S. stk.

Big Creek—Fort Bend County

Merrimac Oil Corp. No. 1 George, B. Wickson Sur. (SW flank). Spd. and S.D.

Caplen—Galveston County

Sun Oil Co.'s No. 3 Cade, A. Dickson Sur. 10¾-in. csg. 1,939 ft.; T.D. 7,532 ft.; 7-in. csg. 7,532 ft.; perf. csg. 7,209-15 ft.; tstg.

League City—Galveston County

Phillips Pet. Co.'s No. 1 Brittnacher, S. F. Austin Sur. Cg. sh. 9,250 ft.
Phillips Pet. Co.'s No. 6 Lobit, Perry Austin Sur. Cg. 9,099 ft.
Phillips Pet. Co. No. 1 Dr. O. Patton (1 mi. E of production). Perf. csg. 9,177-97 ft.; flwd. S.W.; sqzd. perf.; C.O.
Phillips Pet. Co.'s No. 2 J. S. Rice est., J. M. Perry & Austin Sur. T.D. 10,100 ft.; run 5½-in. csg.
Phillips Pet. Co.'s No. 3 Stewart Title Guaranty Co., S. F. Austin Sur. R.U.
Phillips Pet. Co.'s No. 4 Stewart Title Guaranty Co., S. F. Austin Sur. 10¾- in. csg. 3,520 ft.; T.D. 10,458 ft.; 7⅝-in. csg. 9,510 ft.
Phillips Pet. Co. No. 1 Wimhurst (NW extension). T.D. 10,962 ft.; well tried to blow out; D.S. stk.; P.B. 10,630 ft.; perf. csg.; set 23 ft. screen on bttm. 10,882 ft.; flwd. 9 bbl. dist. P.D.; 9/64-in. ck.; T.P. 1,500 lb.; killed well.

Bammel—Harris County

H. M. Harrell's No. 1 Ehrhardt, Ehrhardt & Ketchum Sur. T.D. 6,196 ft.; perf. csg. 6,166-74 ft.
H. M. Harrell's No. 1 Graves, C. Walters Sur. Loc.

Clear Lake—Harris County

Humble O. & R. Co.'s No. 21-C Humble-West, Wm. Dobie Sur. T.D. 5,912 ft.; made squeeze job; W.O.C.
Humble O. & R. Co.'s No. 25-C Humble-West, Wm. Dobie Sur. S.D. 6,145 ft.

Friendswood—Harris County

Humble O. & R. Co.'s No. 19 West, T. Choate Sur. Drlg. sh. 2,212 ft.

Ganado—Jackson County

Texas Co.'s No. 1 Ross, J. Simon Sur. S.D. 5,108 ft.

Clam Lake—Jefferson County

Shell Oil Co., Inc.'s No. 7 McFaddin, S. A. Pace Sur. T.D. 4,003 ft.; 5½-in. csg. 3,964 ft.; flwg. 8 B.P.D.; ⅛-in. ck.; making potential test.

La Belle—Jefferson County

Sun Oil Co. No. 5 Broussard-Hebert, T. &N.O. Sur. No. 207. T.D. 8,710 ft.; perf. csg. 8,685-90 ft.; flwd. S.W.; made sqze. job; perf. csg. 8,667-71 ft., tstd. S.W.; made sqze. job; S.D.

Lovells Lake—Jefferson County

J. H. Blaffer's No. 1 Williams, Wm. Carr Sur. Drlg. sh. 6,080 ft.
Humble O. & R. Co.'s No. 16 Broussard, M. Granger Sur. Drlg. sh. 6,666 ft.
Humble O. & R. Co.'s No. 8 Jefferson Ld., Wm. Carr Sur. Drlg. sh. 4,065 ft.
Stanolind O. & G. Co.'s No. 2-A Steinhagen, Wm. Carr Sur. Drlg. sh. 6,635 ft.
Stanolind O. & G. Co.'s No. 5-A Steinhagen, H. O. Donnell Sur. Drlg. sh. 2,067 ft.

South China—Jefferson County

Hebert & Smith's No. 1 Guitermann, G. T. Gaylor Sur. 12. R.U.

Esperson—Liberty County

General Crude Oil Co.'s No. 7-B Esperson, A. McNeil Sur. T.D. 7,860 ft.; P.B. and sdtrkd.; drlg. sh. 5,089 ft.
General Crude Oil Co.'s No. 9-B Esperson, A. McNeil Sur. T.D. 7,874 ft.; P.B. 7,400 ft.; perf. csg.

Hull—Liberty County

Gulf Oil Corp. No. 115 Phoenix Dev. Co., J. Devore Lge. (SE flank deep test). 9⅝-in. csg. 5,904 ft.; T.D. 7,566 ft.; fsg.

Martha—Liberty County

Pan American Prod. Co.'s No. 1 Hutcheson, Beasley Pruitt Sur. Cg. sh. 8,240 ft.
Stanolind O. & G. Co.'s No. 2 Flowers, I.&G.N.R.R. Sur. Drk.
Stanolind O. & G. Co.'s No. 1 R. G. Palmer, I.&G.N. Sur. 7. T.D. 8,139 ft.; perf. csg. 8,110-15 ft.
Stanolind O. & G. Co.'s No. 2 Seaberg. Drlg. sh. 8,164 ft.
Stanolind O. & G. Co.'s No. 1 H. F. Tyrell, I.&G.N. Sur. 7. 10¾-in. csg. 1,214 ft.; T.D. 8,355 ft.; 5½-in. csg. 8,104 ft.; perf. csg. 8,013-16 ft.; swab. S.W., slight show of oil.

Segno—Polk County

Gulf Oil Corp. No. 4 Quinn, A. Morales Sur. R.U.
Gulf Oil Corp.'s No. 25 Wing, I.&G.N. Sur. 15. Drlg. sdy. sh. 6,680 ft.
Gulf Oil Corp.'s No. 26 Wing, I.&G.N. Sur. 15. T.D. 8,162 ft.; tstg.
Humble O. & R. Co.'s No. 18 BX Kirby Lbr. Co., P. Garcia Sur. T.D. 8,145 ft.; W.O.C.
Jordan Drlg. Co.'s No. 1 E. H. Hughes, I.&G.N. Sur., Sec. 13. Cg. 8,090 ft. No report.

Spurger—Tyler County

Republic Prod. Co.'s No. 28 fee, N. Hurd Sur. R.U.
Republic Prod. Co.'s No. 29 fee, N. Hurd Sur. Drlg. sh. 7,210 ft.

GULF COAST WILDCATS

Brazoria County

Fabriguze et al No. 1 Freeport Sulphur,

Stephen F. Austin Sur. (Byran Mound) M.I.M.

Hamman Expltn. Co. No. 1-B Darrington, State Prison Farm, F. Bingham Sur. Rig.

D. M. Hill's No. 1 Max Bader, Wm Smeathers Lge. Loc.

Humble O. & R. Co.'s No. 1 Hiram Moore, Hooper & Wade Sur., Lot 27 10¾-in. csg. 2,477 ft.; drlg. sh. 8,262 ft.

Humble O. & R. Co.'s No. 1 A. M. Smith, W. D. C. Hall Sur. Drlg. sh. 9,200 ft.

Glenn McCarthy's No. 1 E. W. K. Andrau, H.T.&B. Sur. 5. 10¾-in. csg. 3,512 ft.; cg. 8,990 ft.

Glenn McCarthy's No. 2 Houston Farm Dev. Co., J. Perry & E. Austin Sur. 7 10¾-in. csg. 3,492 ft.; drlg. sh. 9,056 ft.

Mayo & Frazier's No. 1 Darrington, State Prison Farm, A. McFarlan Sur. Drlg. sh. 2,100 ft.

Texas Co.'s No. 8 Freeport Sulphur Co. Ariola Sur. T.D. 3,031 ft.; P.B. 2,486 ft.; 5½-in. csg. 2,450 ft.; run screen.

Chambers County

Geo. Anderson No. 1 Julia Casey, W. D. Smith Sur. Loc.

J. R. Turnbull's No. 2 Kirby Pet. Co., Chambers Co. Sch. Ld. Sur. Spudded.

Colorado County

Cockburn Oil Corp. No. 1 R. W. Ferris H. Chrisman Sur. Loc.

Fort Bend County

H. C. Cockburn's No. 1 G. W. Burkett, Bundieck Sur. Loc.

Gulf Oil Corp.'s No. 1 Russell Brown, Wm. Pettus Sur. 10¾-in. csg. 1,228 ft. cg. sh. 8,380 ft.

H. Link & J. Mayo's No. 1 R. G. Foss, Sec. 63, H.&T.C. Sur. T.D. 6,528 ft.

Magnolia Pet. Co.'s No. 1 G. H. Huntington, Henry Scott Sur. T. Cckfld. 7,556-60 ft.; cg. 8,274 ft.

Ray Ranger's No. 1 Sugarland Industries, John Foster 2½ Lge. Loc.

Superior Oil Co.'s No. 1 A. P. George, Wiley Martin Sur. Drlg. sh. 7,415 ft.

Galveston County

Continental Oil Co.'s No. 1 Lobit-Cherardi, Perry & Austin Sur. Drlg. sh. 2,517 ft.

Hebert & Smith's No. 1 J. A. Harris, Edw. Hall & Levi Jones Sur. Drlg. sh. 2,515 ft.

Harris County

Gulf Oil Corp.'s No. 1 H. H. Roberts, A. Roberts Sur. Spudded.

John Mayo et al's No. 1 A. A. Sharpe, S. G. Haynil Sur. Loc.

Jackson County

J. F. Hutchinson et al's No. 1 W. E. Appelt, J. R. Wickham Sur. T.D. 3,766 ft.; abd.

Jefferson County

Falcon Seaboard Drlg. Co.'s No. 1 Powell, W. V. Vacocy Lge., Lot 6. Drlg. sh. 925 ft.

Merrimac Oil Corp.'s No. 1 State, Tr. 72, 50 ft. due E of Harwell's abd. hole. Driving piling.

Liberty County

Hebert & Smith's No. 1 W. E. Boyt, H. &T.C.R.R. Sur. Loc.

Matagorda County

Gulf Stream Oil Co.'s No. 1 G. W. Zipprian, Luke Lessassier Sur. Drlg. sh. 732 ft.

McDannald Oil Co.'s No. 1 G. W. Shell, B. C. Arthur Sur. R.U.

Van M. Vincent's No. 1 J. F. McNabb Est., E. R. Wightman Lge. Loc.

Montgomery County

H. C. Cockburn et al's No. 1 Bender, Montgomery Co. Sch. Ld. and De Crow Sur. Loc.

David B. MacDaniel's No. 1 Hattie O. Baldwin, Walker Co. Sch. Ld. Sur. 10¾-in. csg. 1,230 ft.; drlg. sh. 7,020 ft.; no report; "tight well."

Ralph Sturm et al's No. 2 Foster, Abraham Perehouse Sur. Loc.

T. J. Wood & J. R. Martin's No. 1 H. B. Fultz, Wm. C. Clark Sur. Spudded.

Newton County

W. M. Oil Co.'s No. 1 W. A. Smith, Tex. Central R. R. Co., Sur. 2. 10¾-in. csg. 1,220 ft.; drlg. sh. 7,465 ft.

Orange County

American Eagle Oil Co. No. 2 Geo. Pell Geo. A. Patillo Sur. T.A. loc.

San Jacinto County

Harrison & Abercrombie's No. 1 Lockin, William Hays Sur. M.I.M.

Tyler County

J. Z. Werby et al's No. 1 Hayes, J. C. Boyett Sur. Drk.

Waller County

Hunter & Mayos et al's No. 1 Humble fee, Wm. Hooper Sur. Drk.

Washington County

Mount Selman Oil Co. No. 1 Fritz Fueiberg, W. Lightfoot Sur. S.D. 4,510 ft.

Sunray Oil Co.'s No. 1 S. E. Lockhart, Gibson Kuykendall Sur. 10¾-in. csg. 1,192 ft.; drlg. sh. 6,650 ft.

Wharton County

Frank Campbell et al's No. 1 Harrison & Mitchell, Sec. 21, G.H.&H.R.R. Sur. Loc.

Dr. T. M. Neal No. 1 fee, Elisha Flack Sur. Loc.

Sun Oil Co.'s No. 1 Winnie M. Pool, G. H.&R.R. Sur. S.D. 7,348 ft.; T.A.

S. W. TEXAS WILDCATS

Aransas County

Continental Oil Co.'s No. 1 St. Charles Co., R. D. Blassman Sur. 18⅝-in. csg. 290 ft.; T.D. 8,384 ft.; rmg.

Atascosa County

Bancroft Drlg. Co.'s No. 1 Krisch, Juan C. Dierks Sur. No. 1207. S.D. 1,665 ft.

Bastrop County

C. R. Franklin's No. 1 Oscar McDonald, Martha Barker Sur. Drlg. 1,050 ft.

Marts & Beaven's No. 1 J. E. Ferguson, Jas. Doyle Sur. S.D. 1,725 ft.

Bee County

Coronado Corp.'s No. 1 Claude Heard, M.M.&J. Tool Sur. 4-min. D.S.T. 3,257-70 ft.; tstd. 320 lb. W.P.; D.S.T. 4,703-08 ft.; tstd. 430 lb. W.P.; drlg. sh. 5,320 ft.

Mills Bennett Prod. Co.-Anderson-Prichard Oil Corp.'s No. 1 D. E. Robinson, J. M. Uranga Sur. T. Wlx. sd. est. 7,531 ft.; cd. sd.&sh. good O.&G. odor; 14-min. D.S.T. 7,541-51 ft. rec. 15 ft. oil; 245 lb. W.P.; will core 10 ft. and make D.S.T.; 5-min. D.S.T. 7,620-60 ft. tstd. 62 lb. W.P.; rec. 225 ft. gas-cut mud; well tried to blow out at 7,921 ft.; stk. D.S.; fsg.

Texas Gulf Prod. Co.'s No. 1 C. E. Culpepper, Dwyer Sur. R.U.

Bell County

G. P. Shelton et al's No. 1 Nelson, Michael Griffin Sur. S.D. 1,208 ft.

Bexar County

L. Beauchamp et al's No. 1 J. J. Brown, R. F. Shield Sur. 19. Loc.

Heller Pet. Co.'s No. 1 Wildmann, Juan Sanchez Sur. 34. Cg. sh. 290 ft.

Geo. Shelton's No. 1 Gembler, Adam Stafford Sur. No. 49. R.U.

J. A. Tarver's No. 1 Florence Lam, Manuel de Luna Sur. 3. 6⅝-in. csg. 1,205 ft.; T.D. 1,692 ft.; cd. bkn. sh. 1,638-92 ft.; S.S.O.; bailed est. 10 bbl. oil P.D. before sanding up; clean out hole.

Blanco County

E. L. Nixon's No. 3 Crist, John McClenechen Sur. 94. T.D. 936 ft.; fsg.

Brooks County

Magnolia Pet. Co.'s No. 1 Vivian Rust, La Gloria townsite subd. Drlg. sh 6,983 ft.

Burleson County

H. Y. Barnett's No. 1 Giesenschlag, J. W. Hollingsworth Sur. R.U.

Caldwell County

Kean & Williamson's No. 1 E. E. Rector, J. Roberts Sur. S.D. 300 ft.

Calhoun County

Continental Oil Co.'s No. 1 Powderhorn Co., Juan Cano Sur., Sec. 2, Blk. J. Cd. gas sd. 5,819-27 ft.; T.D. 5,901 ft.; 5½-in. csg. 5,901 ft.; perf. csg. 5,820-25 ft.; comp. as gas well.

Coronado Corp. No. 1 K. Welder, Hidalgo Sur., 3 mi. SE Seadrift. "Tight well"; drlg. 9,160 ft.

Cameron County

Pure Oil Co.'s No. 3 Gatewood-Newberry, Share 3, San Martin gr. Drlg. sh. 4,665 ft.

De Witt County

Atlantic Ref. Co.'s No. 1 Pearl Conwell, Chas. Lockhart Sur. Loc.

Duval County

J. B. Blanchard's No. 1 E. A. Parr, T. C. Rogers Sur. Drlg. sh. 2,800 ft.

W. L. Catlin et al No. 1 Louis Escapule. J. Poitevent Sur. No. 73. Loc.

Frank Gravis' No. 1 F. Vaello, Robt. Fletcher Sur. Drlg. sh. 5,364 ft.

Magnolia Pet. Co.'s No. 2 Duval Co. Rnh. Co., Sur. 300. Drlg. 1,011 ft.

Magnolia Pet. Co.'s No. 2 Well, C.&M. R.R. Sur. 113. Drlg. sh. 2,438 ft.

Mills Bennett Prod Co.'s No. 1 Henry Adami, J. H. Gibson Sur. No. 349. Cg. 1,010 ft.

Mills Bennett Prod. Co. and Stanolind O. & G. Co.'s No. 2-A Ira Yates, E. N. Gray Sur. 224. Loc.

H. D. Rogers' No. 1 Rossen, R. F. Neeley Sur. 48. S.D. 250 ft.

Rowan & Hope's No. 1 Lopez, M. Lopez Sur. Drlg. sh. 3,197 ft.

Taylor Ref. Co.'s No. 1 Parr, E. Garcia Sur. R.U.

Falls County

I. Shaunfield No. 1 Barganier, J. M. Graham Sur. Bda. L.; S.S.O.; T.D. 1,188 ft.; recmtd. csg.

Frio County

Holland Oil Co.'s No. 1 Anna Witting, Dan T. Price Sur. 6. Loc.

Gonzales County

Continental Oil Co.'s No. 1, J. J. Garlin Sur. Wlx. reported topped 2,960 ft.; T.D. 3,611 ft.; abd.

J. A. Walker et al's No. 1 C. L. Dubose, E. C. Coffman Sur. Drlg. sh. 528 ft.

Guadalupe County

Pat Armstrong's No. 1 Ernst Saeti, J. D. Clement Sur. Drlg. sh. 2,431 ft.

Burton-Garvin & Womack's No. 2 Henry Weil, E. de Los Santos Coy Sur. No. 93. R.U.

Knute Evjen et al's No. 1 W. C. Brawner, J. D. Pickens Sur. T.D. 2,372 ft.; 5½-in. csg. 2,300 ft.

F. D. Spratt's No. 1 Wm. Zuchl, Claiborne Rector Sur. 38. Drlg. 420 ft.

Wellington Oil Co. of Dela.'s No. 1 Wells, H.&T.C.R.R. Sur. 5. R.U.

E. A. Weyel et al's No. 1 H. G. Lentz, Vicente Michelli Sur. 52. T.D. 792 ft., sh.; 3-in. csg. 700 ft.; swbg. 2½ B.O. P.D.; gr. 41.8°.

E. A. Weyel's No. 3 Schaffl K. Bingham Sur. 487. S.D. 701 ft.

Jim Hogg County

W. C. Gray et al's No. 1 Rosa Palacios, G. W. Waddell Sur. S.D. 50 ft.

Humble O. & R. Co.'s No. 2 Mestena O. & G. Co., Francisco gr. Cg. 5,832 ft.

Mayfair Oil Corp.'s No. 1 I. R. Gutierrez, C. Gutierrez Sur. 164. T.D. 3,223 ft.; tstg.; 5½-in. csg. 3,217 ft.; swbd. dry; pmpd. 18 B.F.P.D.; S.D.

C. A. Nibert et al's No. 1 Yeager Sur. 20. S.D. 1,316 ft.

Jim Wells County

Austin Pet. Co. No. 1 H. M. Reed (8 mi. NW Orange Grove), J. Poitevent Sur. Cmtd. surf. pipe 190 ft.; S.D. 210 ft

W. L. Hinds' No. 1 Wm. Adams, T.&N. O.R.R. Sur. 19. S.D. 1,930 ft.

Magnolia Pet. Co.'s No. 1 C. C. Hornsby, Los Olmos y Loma Blanca gr. T.D. 6,435 ft.; D.S. stk.; fsg.

Magnolia Pet. Co.'s No. 1 W. C. Hornsby (La Gloria field). T.D. 7,219 ft.

Magnolia Pet. Co.'s No. 1 E. H. Stolze et al, Los Olmos y Loma Blanca gr., Lot 16, Blk. 10. Cd. sd.&sh. dist. odor 6,586-6,637 ft.; T.D. 7,347 ft.; P.B. 7,041 ft.; perf. csg. 7,000-10 ft.; tstg. 7-in. csg. 7,024 ft.; flow. gas and dist.

A. F. Sears & A. E. McKenzie's No. 1 J. H. McGahee, 10¾-in. csg. 196 ft.; drlg. sh. 4,277 ft.

Karnes County

Clyde Eckols' No. 1 J. M. Newberry, Carlos Martinez Sur. Cg. 1,870 ft.

Gar Oil Co.'s No. 1 R. L. Barnett, Alex C. Hunter Sur. S.D. 8 ft.

Kendall County

C. M. Dewey's No. 2 Seidensticker, R. Davis Sur. No. 20. S.D. 835 ft.

Kimble County

A. L. Bierschwale's No. 1 F. W. Kraeke, Sur. 366. Drlg. L. 980 ft.

Kleberg County

Humble O. & R. Co.'s No. 1 H. Andrews, Rincon De Santa Gertrudis gr. 8⅝-in. csg. 1,082 ft.; drlg. sh. 3,989 ft.

Humble O. & R. Co.'s No. 1 J. M. Reed, Rincon De Santa Gertrudis gr. T.D. 7,192 ft.

La Salle County

John Vivian's No. 1 Louis Yeager, A.B. &M. Sur. 53. Cd. O.S. 699-703 ft.; T.D. 709 ft.; 5½-in. csg. 696 ft. (cor.); swb. S.W.; cg. deeper.

Lee County

Fred Pederson et al No. 1 Brown, Davis Hudson Sur. T. Glen Rose L. 6,600 ft.; drlg. L. 6,909 ft.

Live Oak County

Amory Oil Corp.'s No. 1 Moezygemba, S. M. Williams Sur. No. 113. Loc.

L. W. Stieren's No. 3 Lange, Thos. Adams Sur. T.D. 1,497 ft.

McMullen County

Harrison & Ross' No. 1 T. A. Bracken, W. W. Allsberry Sur. 30. T.D. 1,086 ft.; S.D.

C. D. Scarborough No. 1 First Natl. Bk. of Rosebud, Jas. Garner Sur. S.D. 1,680 ft.

Medina County

Elstone Oil Co.'s No. 1 Wm. Mann, J Campbell Sur. 24. 8¼-in. csg. 635 ft.; 7-in. csg. 1,025 ft.; T.D. 1,686 ft.; abd.

Milam County

Alex Krause's No. 1 Graves, Jackson Hall Sur. T.D. 1,527 ft., L.; swbg.

W. H. Lawrence et al's No. 1 J. F. Bartek, Jose De Pena. Sur. Cg. 1,605 ft.

Taylor Ref. Co.'s No. 1 Lora Sheppard, Jose Justo Liendo Sur. T.D. 2,023 ft.; abd.

Nueces County

John Manley et al No. 1 Ruegg, Geo. H. Pauls subd. of Driscoll ranch. Loc.

Fred Shields' No. 1 J. H. McElroy, M. L. De Herrera gr. Drlg. sdv. sh. 2,856 ft.

Shield Oil Co.'s No. 1 N. S. Fulton, Nueces River Irrg. Park subd., Lot 8, Blk. 4. Loc.

Refugio County

D. C. Matthews et al's No. 1 L. C. Munzenberger, J. M. Aldrete Sur. Drlg. sh. 1,410 ft.

Norsworthy Prod. Co. No. 1 Wood, John Sinnott Sur. T.D. 6,508 ft. (cor.); S.D.

Starr County

Clonton & Mitchell's No. 1 Green & Manning, J. J. Garza Falcon Por. No. 81. S.D. 377 ft.

Clopton, Mitchell et al's No. 1 F. W. Seabury, J. A. Falcon, Porc. 80. 8¼-in. csg. 88 ft.; T.D. 2,757 ft.; S.D.; S.W. sd.; 5½-in. csg. 1,403 ft.

C. L. Foster's Nd. 1 H. Garza, Juan Salinas, Porc No. 71. S.D. 100 ft.

W. E. Gilbert's No. 1 Escobas, Jose F. Garza, Porc. 71. S.D. 330 ft.

Lynes & Robertson's No. 1 Villareal, C. C.S.D.&R.G.N.G.R.R. Sur. 241. Loc.

Magnolia Pet. Co.'s No. 2 Yzaquirre, La Sal Colorado gr. Drlg. 2,212 ft.

Travis County

J. H. Gray's No. 1 Washington, Jose Antonio Navarro Sur. S.D. 1,105 ft.

Victoria County

Barnsdall Oil Co.'s No. 1-A Keeran, M. De Leon Sur. Drlg. sh. 6,286 ft.

W. S. Boyle's No. 1 P. C. Meyer, Victoria townsite Sur., Blk. 3. R.U.

Renwar Oil Corp.'s No. 1 M. L. Stoner, Diego Garcia Sur. T.D. 6,015 ft., sd., O.S. 4,281-83 ft.; W.O.

Transwestern Oil Co.'s No. 1-G McFaddin, Jules Vairin Sur. Drk.

Webb County

Amsco Ref. Co.'s No. 1 R. Y. Vasquez, Morris & Cummings Sur. No. 1089. Loc.

Mayfair Oil Corp.'s No. 3 Bruni, J. V. Borego gr. T.D. 1,601 ft.; abd.

Geo. Noble's No. 1 Row & Bonham, D. F. Felps Sur. 1698. Loc.

Tide Water Asso. Oil Co. No. 7 Bruni, Blk. 7, M. Arispe gr. (deep test Bruni field). T.D. 8,959 ft.; well blew out; hole bridged; stk. D.S.; prep. to P.B. and test approx. 5,600 ft.

Williamson County

Jackson & Zizinia's No. 1 H. B. Land, P. Coursey Sur. S.D. 410 ft.

H. C. Lefors' No. 1 H. J. Priesmever Jehu Bevil Sur. 56. Drlg. sh. 1,025 ft.

Zapata County

J. P. Martin et al's No. 1 Serapio Vela, El Grullo gr. Drlg. sh. 1,980 ft.

Neilson & Wise's No. 1 Maryland Tr. Co., J. H. Vermilion Sur. 314. T.D. 2,314 ft.; 5½-in. csg. 1,816 ft.; perf. csg. 1,774-80 ft.; swab wash wtr., small amt. of gas-cut mud with some oil.

WEST TEXAS WILDCATS

Crane County

Gulf Oil Corp. No. 5 M. B. McKnight, Sec. 1, Blk. 21-B, P.S.L. Sur. Drlg. out 5,570 ft.

Gulf Oil Corp.'s No. 12 Waddell, Sec. 30, Blk. 26-B, P.S.L. Sur. 12-in. 532 ft.; drlg. 2,205 ft.

Crockett County

Commercial O. & G. Co.'s No. 1 O. W. Parker, Sec. 83, Blk. 1, I.&G.N. Sur. drlg. 1,275 ft.

Continental Oil Co.'s No. 1 Todd Unit, SW¼ Sec. 30, Blk. W.X., C.G.S.F. Sur.; Ordovician test. Topped Simp. at 6,040 ft.; show dead oil; prep. core at 6,485 ft.

Kimberlin's No. 1 J. W. Robbins, Sec. 4, Blk. B, G.C.&S.F. Sur. Drlg. 1,785 ft.

Moore Bros.' No. 1 Henderson, Sec. 51, Blk. O.P., G.C.S.F. Sur. U.R. 725 ft.

Dawson County

Ray Albaugh's No. 1 Dewey Hogg (O. W.D.D.). S.D.O. 4,222 ft.

Ector County

Landreth Prod. Corp. and Shell Oil Co., Inc.'s No. 1 J. L. Johnson, Sec. 43, Blk. 43, Twp. 1s, T.&P. Sur. Drlg. 3,910 ft.

Gaines County

Oil Well Drlg. Co.'s No. 1 R. E. Sikes, Sec. 10, Blk. 25-A, P.S.L. Sur. Loc.

Stanolind O. & G. Co.'s No. 1 American Warehouse, Sec. 5, D.&W. Sur., offset to No. 1 Rayner, discovery well. S.O. 4,624-4,734 ft.; 7-in. 4,388 ft.; W.O.C.

Stanolind O. & G. Co.'s No. 1 T. S. Riley, Sec. 11, Blk. H, D.&W. Sur. Drlg. 4,230 ft.

Hockley County

Geo. P. Livermore's No. 1 R. D. Glimp, Sec. 8, Blk. X, P.S.L. Sur. W.O.C. 290 ft.

Irion County

W. S. Kelly's No. 1 Yates, Conrad Poppe Sur. No. 730. Loc.

Loving County

J. E. Whitesides' No. 1 fee, Sec. 24, Blk. 76. Bldg. roads.

Lynn County

John L. Baldridge No. 1 Alma Lbr. Co., Sec. 151, H.E.W.T. Sur. Drld. out 3,570 ft.; S.D.O.

Pecos County

Humble O. & R. Co.'s No. 1 Young, Sec. 33, Blk. 10, H.&G.N. Sur. Drlg. 2,146 ft.

B. McCandless and General Crude Oil Co.'s No. 1 Virginia W. Crockett, Sec. 5, Blk. 110, T.C.R.R. Sur. Drlg. 2,005 ft.

Stanley Thompson No. 1 Elsinore Cattle Co., Sec. 54, Blk. D, G.C.&S.F. Sur. Drld. by 7;073 ft.; 500 ft. S.W. in hole; S.D.O. 7,342 ft.

Superior Oil Co. No. 1 V. W. Crockett-Continental Oil Co., Sec. 7, Blk. 110, T.C.R.R. Sur. C.&P.

H. C. Walker's No. 1 Alva Reed, Sec. 20, Blk. 10, H.&G.N. Sur. W.O. rotary 63 ft.

Williams & White's No. 1 Bailey, Sec. 25, Blk. 146, T.&St. L. Sur. P.B. 5,828 ft. from 3,005 ft.; drld. out to 2,990 ft.; est. 8 B.O. and 4 B.W. dly.

Reeves County

T.A.T. Oil Co.'s No. 1 U. G. Orenderff, Sec. 10, Blk. 59, P.S.L. Sur. S.D.R. 300 ft.

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Scurry County

Coffield & Guthrie's No. 1 Reiter, Sec. 155, Blk. 97, A.T.&T.C. Sur. Drlg. 2,600 ft.

Terrell County

E. M. Thomasson No. 1 Bates, Sec. 31 Blk. 1, H.&G.N. Sur. S.D.O. 1,560 ft.

Tom Green County

Cannon & Hagen's No. 1 M. D. Bryant, S. Raul Sur. No. 753. Loc.

Johnson's No. 2 Rape, Sec. 2, Blk. 18, H.&T.C. Sur. S.D.O. 339 ft.

Dan Short's No. 1 J. G. Davidson, NW part of Lovie P. Moore Sur.; 3,500-ft test; S.S.O.&G. 2,660-65 ft.; drlg. 2,690 ft.

Ward County

Gulf Oil Corp. No. 5 Wristen, Sec. 18 Blk. 5, H.&T.C. Sur.; scheduled Ordovician test; drlg. out at 2,600 ft.

Magnolia Pet. Co.'s No. 2-43 Sealy, Sec 43, Blk. F, G.M.M.B.&A. Sur. W.O. 2,952 ft., T.D.; making 69,000,000 cu. ft. gas; incr. amt. oil; prep. to D.D.; P.B. 2,931 ft.; S.D.R.; liner not cmtd.

Merry Bros. & Perini's No. 1 Bird Hayes, Sec. 148, Blk. 34, H.&T.C. Sur. S.D.R. 657 ft.

Yoakum County

Sloan & Zook and T. N. Sloan's No. 1 J. E. Fitzgerald, Sec. 22, Blk. D, Gibson Sur., extreme NE cor. of county W.O.T.; T.D. 4,843 ft.; 7-in. csg. 4,812 ft.

TEXAS PANHANDLE

Deaf Smith County

Ucean No. 1 Farwell, Sec. 18, Blk. 3, X Sur. C.O. 5,650 ft.

Hartley County

Phillips Pet. Co. No. 1 W. K. Gordon, Sec. 3, Blk. 44, H.&T.C. Sur. showed 34,300,000 cu. ft. gas below 3,415 ft.; P.B. for gas well 3,415 ft.; tstg.

Lipscomb County

Phil O'Neil's No. 1 Jacob Koch, NW¼ SW¼ Sec. 539, T.&T.C.R.R. Sur. S.D. 1,100 ft.

Ochiltree County

James R. Macon et al No. 1 W. R. Norris, SW SE Sec. 212, Blk. 43, H.&T.C. Sur. T.D. 6,274 ft.; test sec. at 5,000 ft.; est. 6,000,000 cu. ft. gas on D.S.T.; tstg.; bailing 6,274 ft.; unloaded csg. at well and preparing to test increasing shows of oil and gas.

Potter County

Lee Whitaker No. 1 D. Pavillard, Sec 101, Blk. 2, A.B.&M. Sur. Fish out; S.D. 915 ft., csg.

Sherman County

Hagy, Harrington & Marsh's No. 1 W Freeman, Sec. 46, Blk. 2, G.H.&H Sur. T.D. 3,272 ft.; prep. P.B.

I.T.L.O.'s No. 1 S. C. Bryant, NW¼ Sec 369, Blk. 1-T, T.&N.O. Sur. Fsg. tools 2,511 ft.

E. C. TEXAS WILDCATS

Anderson County

R. H. Williamson No. 1 O. G. Rogers Wm. Greenwood Sur., 6 mi. SW of Elkhart. Moving in heavy rig 5,160 ft.

Angelina County

Ginter Bros. No. 7 Copes Hrs., J. Morin Sur., 3 mi. E of Diboll. S.D. 800 ft.

K. L. McHenry's No. 2 Russell, est., A. Flores Sur., 4 mi. N Lufkin. Prep rng. csg. topped sd. 1,002 ft. 2 B.O. and 4 B.W. in 5 min.; pmp. 16 B.O. and 34 B.W.P.D.; S.I. 1,004½ ft.

Cherokee County

C. C. Lanier's No. 1 W. O. Reagan, W. T. Smith Sur., 2½ mi. E of Mixon. Loc.

Falls County

A. H. Bell's No. 2 Garrett, J. Sanchez Sur., NE of Lott. Loc.

R. D. Salisbury No. 1 W. M. Shankle, J. A. Manchaca Sur., 1½ mi. NE Chilton S.D. 1,274 ft.

Fannin County

H. W. English's No. 1 T. W. Ayers, J. D. Seales Sur. S.D. 815 ft.

C. Newburn's No. 1 A. G. Allen, M. Caldwell Sur., 7 mi. NE of Banham Laying wtr. lines.

Hill County

Carter-Bowland's No. 1 J. J. Atchison estate, E. Carrol Sur., 5 mi. W of Hillsboro. S.D. 85 ft.

Houston County

J. C. Cook and Shell Oil Co.'s No. 1 B T. Masters, Levina Carpenter Sur., ½ mi. NW of Grapeland pool; 10,000-ft test. C.O. 8,060 ft.; flwg. 1 B.O. and considerable gas; S.I. 6,060 ft.

J. C. Wynne et al's (Shell Oil Co., Inc.) No. 1 G. E. Dorsey, M. Sallas Sur. 2½ mi. S of Percilla; E 102 ac. of tr.; 10,000-ft. test. Drlg. 7,150 ft.

Hunt County

Westmount Oil Co.'s No. 1 Clark, W. H. Williams Sur., 1 mi. NW of Celeste S.D.O. 5,314 ft.

Leon County

Lone Star Gasoline Co.'s No. 2 A. Jones, J. M. H. Jones Sur., Buffalo gas area. Cg. 5,952 ft.

Limestone County

Peyton Bros.' No. 1 Harris, P. Varella Sur. P.B. 3,200 ft.; W.O.C.

J. J. Tyrell's No. 1 A. G. Easterling, J. L. Chavert Sur., 11 mi. E of Groesbeck. S.D.R. 1,700 ft.

McLennan County

T. M. Smart's No. 1 J. W. Mann, C. O'Campo Sur., 4 mi. S of Waco. Drlg. 470 ft.

Nacogdoches County

C. W. Burnaman's No. 1 W. L. Burnaman, H. Hamby Sur., ½ mi. SW of Etoyle. Loc.

Navarro County

J. H. Burke's No. 1 fee, Edmonson Sur. 1 mi. N of Powell. P.B. 680 ft.; tstd. dry; prep. P.B. again.

C. F. Carter's No. 1 Allen Eden, M. Shire Sur., 2 mi. NE of Angus. S.D.O. 1,201 ft.

Rusk County

Jeff Bolton's No. 1 Hall Wood, J. I. Sanches Sur., 2½ mi. NW of New Salem. Drlg. 110 ft.

Marietta Corp.'s No. 1 E. B. Alford, Thos. Howeth Sur., 1 mi. S of Pinehill. R.U.

A. O. Whittington's No. 1 Kangerga Bros., Ign. Castro Sur., 9½ mi. N and slightly E of Pirtle. R.U.R.

Red River County

Dave Flesch's No. 1 Bailey, J. Robbins Sur., 1 mi. W of Bagwell. S.D. 3,415 ft.

Kansas-Oklahoma Pet. Corp. No. 1 R. H. Ringwald, A. Moore Sur., 3 mi. W of Manchester. S.D. 1,000 ft.

Smith County

Shell Oil Co., Inc.'s No. 1 H. Campbell, P. Lively Sur., 1½ mi. N of Chapel; 9,500-ft. test. T. Paluxy 5,533 ft.; cg. 5,900 ft.; T. Glen Rose 5,818 ft.

Trinity County

Gossage et al's No. 1 First Natl. Bak., B. F. Wright Sur., S of Trinity. R.U. and S.D.

NORTH TEXAS WILDCATS

Archer County

L. T. Burns' No. 1 J. Penartz, Sec. 19, Clark & Plumb Sur., Blk. 4. Drlg. 3,975 ft.

L. B. Burns' No. 1 H. Wilmut, Lot 13, G.N. Smith Sur., Abst. 393 (4,400-ft. semiwildcat). Flwd. 150 B.O. in 3 hrs., 4,376-96 ft.; showed S.W.; P.B. 4,384 ft.; trying to s.o. wtr.

W. B. Hamilton's No. 5 C. E. Graham, J. D. Young Sur. A-1249. 6⅝-in. 5,205 ft.; P.B. 4,930 ft.; perf. csg. 4,750-70 ft.; treated 1,000 gal.; tstg.

Waldo E. Stephens et al's No. 1 Hattie B. Adae, SE part of Blk. 7, Palo Pinto Co. Sch. Lds., 3 mi. SE of Griffin pool. Set 10-in. 100 ft.; drlg. 4,300 ft.

Clay County

L. T. Burns No. 1 J. T. Pickett, W. W. Yearly A-745. 6⅝-in. 4,430 ft.; O.S. 4,430-44 ft.; P.B. 4,380 ft.; drld. out to 4,450 ft.; pmpg. est. 20 B.O. and 15 B.W. daily.

Continental Oil Co. et al's No. 1 O. O. Ross, W. Walker Sur. A-703. Set 158 ft. 10-in.; cg. oil in lime 5,350-5,400 ft.; 6⅝-in. 5,342 ft.; tstg. S.O.

Frabor-Hodges and Sinclair Prairie Oil Co.'s No. 1 Scaling, G. P. Meade Sur., Abst. 928. Drlg. 4,301 ft.

Cooke County

Big Indian Oil Dev. Co.'s No. 1 M. P. Morton, SW cor. Sec. 1, E.T.R.R. Sur., Abst. 365. Drlg. 1,800 ft.

Heydrick et al's No. 1 W. Franklin, A. Rodiquez Sur., Abst. 851. Spd. and S.D.

Cottle County

J. E. Burns et al No. 1 J. E. Moss, Sec. 6, Blk. L, A. Forsythe Sur. Jnkd. 225 ft.; skd. 20 ft. S; S.D. 1,823 ft.

Denton County

Jones Drlg. Co.'s No. 1 H. K. Armstrong, L. Moore Sur., Abst. 824. Drlg. 1,410 ft.

Foard County

Foster Pet. Corp.'s No. 1 E. M. Gamble, 4,500-ft. test; E. 180 ac. of S½ Sec. 13, Block A. H.&T.C. Sur. Drlg. 972 ft.

Grayson County

Ross & Marshall's No. 2 E. Christman, M. Ahult Sur., 5 mi. NW of Denison. S.D. 852 ft.; S.S.O.

Hardeman County

Carter & Taylor's No. 1 Norton, NW cor. 91-ac. tr. in Blk. 3, Robt. Young Sur., 16 mi. N of Quanah. S.D. 256 ft.

Montague County

W. H. Gant and Continental's No. 1 J. L. Brown, Sec. 58, E.T.R.R. Sur. Drlg. 6,750 ft.

Jack County

J. B. Cooper and Paul P. Steed's No. 1 Mathis, J. H. Nesmith Sur., Abst. 1562. Loc.

Harper Pet. Corp. No. 2 S. V. Vanhooser, Abst. 1926, J. W. Morrow Sur. T.D. 2,030 ft.; S.D.O.

Jim Lanning's No. 1 A. T. Smith, NE cor. Sec. 2, S.P.R.R. Sur., Abst. 2175. R.U.R.

Pitser & West's No. 1 Sloan, Sec. 2736, T.E.&L. Sur. Rng. 8-in.; cg. dry sd. 2,770-80 ft.; S.D.O.

Wichita County

Bridwell Oil Co.'s No. 1 Fred L. Cone, SE cor. J. M. Sharp Sur., Abst., 262. Drlg. 2,300 ft.

Wilbarger County

Rogers & Cavin No. 1 A. P. Morris, Sec 3, Blk. 14, SW of Harrold. S.D. 2,373 ft.; wtr.

Wise County

W. F. Holifield et al's No. 1 J. Redell, Rebecca Coleman Sur., Abst. 156, 2 mi. E of Bridgeport. Moved off spdr.

T. M. Muse No. 1 F. F. Kaker, Blk. 16, Matagorda Co. Sch. Ld. Pits.

Young County

Burns Oil Co. (Floyd Scott) No. 1 W. J. Rhoades, SW B. F. Kutch Sur. Abst. 1333. Drlg. 1,950 ft.

Coeden Pet. Corp.'s No. 1 W. E. Steele est., NE part of R. M. Burton Sur., Abst. 8, 7 mi. SE Graham. 4,200-ft. test. Drlg. 2,101 ft.

H. W. Dyer's No. 1 M. G. Cheney, M. L. Terry Sur., Abst. 1261. Drk.

L. A. Long's No. 1 J. S. Williams, 3,000-ft. test in NE part of S. H. James Sur., Abst. 1465. Loc.

K. R. March's No. 1 Ed. Burton, NE cor. Blk. 99, J. A. True Sur., Abst. 1640, 4 mi. SE Graham, 4,250-ft. test. Drlg. 922 ft.

A. T. Strong et al's No. 1 E. C. Stovall, Sec. 2946, T.E.&L. Sur. (4,800-ft. test). Drlg. 1,580 ft.

Taubert & McKee Drlg. Co.'s No. 1 Shanafelt, P. Pointevent Sur., Abst 1309. 6⅝-in. 4,012 ft.; treating 2,000 gal. acd. 4,437-4,500 ft.; P.B.; H.F.W. 4,398-4,410 ft.; S.D.

EAST TEXAS

(Border Counties)

Marion County—Other

H. N. Binge's No. 1 W. P. Stiles, 950 ft. S, 4,900 ft. E NW cor., M. G. Nall Sur. Set 10-in. csg. 42 ft.; W.O.C. 45 ft.

M. D. Fitzwater No. 1 Mrs. Mary Duncan Jesse Fitzgerald Sur. T.D. 2,558 ft.; swbd. and bailed dry; tstg.

J. D. Reynolds' No. 4-B Terry est., 1,900 ft. SL, 200 ft. EL, W. Coore Sur. R.U.

J. D. Reynolds' No. 5 Terry est., W. Coore Sur. T.D. 2,359 ft.; W.O.S.R.

Marion County—Rodessa

Tippett Drlg. Co.'s No. 2 Howard, 540 ft. NL, 933 ft. SW No. 1, John Hanks Sur. Drlg. sh.&L. 4,815 ft.

Shelby County

W. H. Neel et al's No. 1 J. W. Hanson, C 64-ac. tr., A. Sanford Sur. M.I.M.

WEST CENTRAL TEXAS DISTRICT

Brown County

A. D. Bruce's No. 1 L. S. Mauldin, SW¼ Sec. 15, H.T.&B. Sur., Abst. 464. S.D. 1,691 ft. (may D.D.).

Kynaston & Cullison's No. 1 L. A. Hill, SW¼ Sec. 35, H.T.&B. Sur. S.D. 1,000 ft.

Wilson Oil Co., Inc., No. 1 M. Bowden, Sec. 138, W. E. Gilliland Sur. S.D.O. 2,100 ft.

Coleman County

Kynaston-Culberson-Culberson & Bozeman No. 1 J. P. McCord, Sec. 159, J. W. Meeks Sur. S.D.O. 2,300 ft.

States Oil Corp.'s No. 1 J. P. Morris, SE part of J. P. Stone Sur. 6. Top sat. sd. 3,591 ft.; cmtd. csg.; prep. drill in.

Concho County

Natural Resources Corp. No. 1 Armor, Sec. 105, Blk. 72, T.&N.O. Sur. S.D.O. 1,216 ft.

Coryell County

W. E. Crews' No. 1 S. C. Blanchard, W part of Wm. H. King Sur., 2 mi. SW of Mound, 5,000-ft. test. Loc.

Eastland County

Dobbs Oil Corp.'s No. 1 Pierce, 330 ft. SL and 330 ft. EL of 214-ac. tract in Sec. 35, Blk. 2, H.&T.C. Sur. Drlg. 2,710 ft.

R. R. Groce's No. 1 J. M. Rush, Sec. 130, Blk. 3, H.&T.C. Sur. S.D.O. 1,728 ft.

F. S. Holden's No. 1 J. F. Nichols, L. A. McDonals Sur., Abst. 829. Drlg. 1,660 ft.

Lone Star Gas Co.'s No. 1 F. J. Kimmel, Sec. 87, Blk. 4, H.&T.C.R.R. Sur. S.D. for test 3,641 ft.; S.O. est. at 40 B.O.P.D.

J. L. Reeves No. 1 J. V. Parker, NW part of Wm. Van Norman Sur. Fsg. 3,077 ft.; S.S.O. 3,019-41 ft.; S.D.O. 3,077 ft.

W. A. Stiles et al's No. 1 H. F. Duncan, Sec. 10, Blk. 2, H.&T.C.R.R. Sur. Pits.

Erath County

T. Gray's No. 1 C. Young Hrs., NW cor. of Stephen Smith Sur., Abst. 662. S.D.O. 89 ft.

T. G. Jackson No. 1 J. W. Taylor, Prater Sur., Abst. 1029, 4 mi. NE of Desdemona. S.D. csg. 2,400 ft.

J. F. Morissey et al's No. 1 R. J. Sikes, J. Hargrave Sur., 6 mi. N of Stephenville; 5,000-ft. test. S.D.O. 330 ft.

Fisher County

S. and D. Daube's No. 2 Bennett, NE¼ Sec. 51, Blk. 2, H.&T.C. Sur. S.D. test lime 3,687-3,704 ft.; swbd. 28 B.O. and 4 B.W. daily at 3,640 ft.; T.D. 3,705 ft.

Hamilton County

Wallace & Vickers' No. 1 C. C. Lund, J. P. Bailey Sur. 51. S.D.O. 3,453 ft.

Haskell County

K. N. Nowels' No. 1 M. S. Pardue, SW cor. Sec. 1, S.F.I.W. Sur., 4½ mi. east Stamford. Drlg. 765 ft.

Jones County

Butler & Horne's No. 1 J. C. Thompson, Sec. 48, Blk. 18, T.&P. Sur. Fsg. 100 ft.

Danciger O. & R. Co.'s No. 1 B. P. Davenport, NE¼ Sec. 23, D.D.&A. Sur. S.D. to check samples 3,050 ft.

Fain-McGaha Oil Corp.'s No. 1 L. T. Burns, S½ SE¼ Sec. 38, Blk. 15, T.&P. Sur. Putting on pump; P.B. to 1,940 ft.

Keeler's No. 1 Radford, SE¼ Sec. 20, Blk. 4, H.&T.C.R.R. Sur. S.D.O. 1,800 ft.

L. H. Pearson's No. 1 P. V. Nelson, SE¼ Sec. 186, B.B.B.&C. Sur. Loc.

Nolan County

Plymouth Oil Co. No. 1 F. M. McClure, Sec. 49, Blk. 23, T.&P. Sur., 8,000-ft. test. Drlg. 6,195 ft.

Palo Pinto County

J. Jones' No. 1 R. H. Gauldin, NW cor. Sec. 1743, T.E.&L. Sur. Drlg. 785 ft.

Palo Pinto O. & G. Co.'s No. 1 F. A. Johnson, Sec. 61, Burleson Co. Sch. Lds. Drlg. 2,490 ft.

Parker County

Brown & Gardner Bros. No. 1 Gilbert, T.&P. Sur., Abst. 1958. Drlg. 3,592 ft.

Shackelford County

Georgian Oil Corp.'s No. 1 Black ranch, C NE¼ of T.E.&L. Sur. No. 390, 10 miles NE of Albany, Ordovician test. U.R. csg. 885 ft.; T.D. 1,600 ft.

Stephens County

Geo. E. Fagg No. 1 Richardson, Sec. 6, Blk. 31, S.P.R.R. Sur.; 4,000-ft. test S.O. 3,430-45 ft.; rng. csg. to test 3,940 ft.

Pitzer & West and Brazos-Young Oil Corp.'s No. 2-B N. G. Price, SE cor. E½ SW¼ Sec. 67, B.A.L. Sur. Rng. csg. 3,976 ft.; est. 1,000,000 to 2,000,000 cu. ft. gas in L. 3,970-76 ft.; fsg. tools 3,976 ft.

Wittmer O. & G. Co.'s No. 2 B. D. Loving, NE¼ Sec. 11, O.A.L. Sur. Making 7,500,000 cu. ft. gas, sd. 2,200-62 ft.; S.I.

Stonewall County

Shell Oil Co., Inc., No. 1 A. E. Smith, Sec. 143, Blk. 1, H.&T.C. Sur.; 6,000-ft. test. U.R. 3,450 ft.

MISSISSIPPI

Harrison County

Big Ridge Oil Co.'s No. 1 Hengin, C NE Sec. 13-7s-10w. T.D. 2,728 ft.; D.&A.

Hinds County

Byrd-Frost et al's No. 1 Gaddis Farms, 275 ft. SE cor. SE SE Sec. 12-6n-3w. Drlg. 4,947 ft.

Miss. Basin O. & G. Co.'s No. 1 Gaddis farms, 150 ft. E, 250 ft. S. NW cor. NW SW Sec. 17-7n-2w. T. Selma chalk 4,856 ft.; T.D. 6,145 ft.; hole bridged; P.B. 1,052 ft. and sdtrkd.; drlg. 4,035 ft.

Itawamba County

G. C. Grasty et al's No. 1 Ky. Lbr. Co., 1,320 ft. E, 660 ft. S, C Sec. 7-10s-10e. Twisted off D.S., skdd. 24 ft. S and spd.; set 10¾-in. csg. 170 ft.; S.O. 1,500 ft.; drlg. 1,585 ft.

Issaquena County

E. B. Germany et al's No. 1 J. C. Mohanna, Sec. 13-18n-3e. Spudding.

Locke & Mellard's No. 1 W. Gary, 660 ft. SE cor., NW Sec. 14-9n-6w. Loc.

Kemper County

M. R. Crabb et al's No. 1 W. T. Caldwell, NW SE Sec. 25-9n-15w. 10¾-in. csg. 86 ft.; cor. T.D. 1,420 ft.; S.D. repr. rig; T. chalk 1,390 ft.; arng. run csg.

Lamar County

Miss.-La. Oil Synd.'s No. 1 Simmons, 1,020 ft. N, 56 ft. W, SE cor. NE Sec. 32-3n-14w. T.D. 100 ft.; S.D., fuel.

South Miss. Pet. Corp.'s No. 1 Pearly Morris, 500 ft. S, 570 ft. E, C Sec. 4-2n-14w. D.&A. 3,102 ft.

Monroe County

Willmut G. & O. Co.'s No. 1 Roberts, NW Sec. 18-13s-17w. Drlg. hd. sd. 1,065 ft.

Prentiss County

Home Dev. Co.'s No. 1 Mrs. A. Allen, Sec. 8-7s-9e. Drlg. dolo. 1,312 ft. (no report).

Rankin County

Willmut G. & O. Co.'s No. 1 Boehle, NE NW Sec. 8-5n-2e. Spudded.

Sharkey County

Chas. W. Crader's No. 1 D. D. Wells, 600 ft. N, 860 ft. W, SE cor. NW Sec. 27-12n-7w. Spudded.

Simpson County

Cleve Love No. 1 N. E. Gardner, SW cor. SW NE Sec. 1-10n-17w. S.D. 3,180 ft., Wix.; R.U.

(Continued on Page 105)

Personal Paragraphs

M. J. LASSEIGNE, Arkansas Louisiana Gas Corp., Shreveport, La., is addressing the joint annual meeting of the standing committee on state and local taxation and the standing committee on federal income and excise taxation on the subject, "Developments in Income Taxation in Louisiana and Arkansas," at Houston this week.

G. E. LEWIS, Standard Oil Co. of Indiana assistant manager-reseller at Indianapolis, Ind., has been transferred to Grand Rapids, Mich.; H. H. AKERS from assistant manager-wholesale at Indianapolis to assistant manager-reseller at the same office; and G. S. VAN EMAN from assistant manager-reseller at Grand Rapids to assistant manager-wholesale at Indianapolis.

S. M. HASKINS, of Los Angeles, Calif., and former president of Los Angeles Railway Co., has been elected a member of the board of directors of Union Oil Co.

F. B. PLUMMER, of the bureau of economic geology, University of Texas, addressed members of the Shreveport (La.) Geological Society last week on the subject, "The Geology and Structure of the Llano Uplift."

M. L. MAYFIELD, petroleum engineer with Cities Service Oil Co., Gladewater, Tex., will be the principal speaker at the December meeting of the East Texas chapter, American Petroleum Institute, where he will give a paper on pumping at different levels in East Texas.

HINES BAKER, director of Humble Oil & Refining Co., Houston, Tex., has been appointed chairman of the newly organized endowments and gifts board for the University of Texas. The board will serve as an advisory body in the handling of gifts and endowments to the university.

W. J. ARMSTRONG, chief conservation officer of the Oklahoma Corporation Commission, attended the annual meeting of the Oklahoma Stripper Well Owners Association held in Tulsa, December 1. It is an open secret that friends of Mr. Armstrong are trying to prevail upon him to become a candidate for the Corporation Commission next year, at which time Commissioner A. S. J. SHAW'S present term of office will expire.

HENRY LINAM, president of Standard Oil Co. of Venezuela, who has been in New York several days conferring with executives of the parent company, Standard Oil Co. of New Jersey, returned to Caracas December 1 aboard the Santa Rosa.

FRANK E. HOLSTEN, formerly vice president of the Barnsdall Refining Corp., has been spending considerable time in New Orleans in the offices of the Chalmette Petroleum Corp., of which he has been made a director. Mr. Holsten is expected to return to his home in Tulsa at some time during the holiday season, but will then return to his New Orleans offices to resume work directing the refining operations of the company.

TOM BAILEY and W. S. ADKINS, of Shell Oil Co., Inc.'s geological department at Houston, Tex., were recent Shreveport visitors.

DR. FEDERICO PANTIN, chief engineer of the Caribbean Petroleum Co., Shell subsidiary in Venezuela, returned to headquarters in Caracas last week. He was accompanied by Mrs. Pantin and daughters, Josefina and Nellie Pantin.

W. T. BOSTWICK, formerly assistant district land man for Texas Co. in the West Texas and New Mexico area, has been made head of the land department in the Wichita Falls district. He succeeds FRANK HODGINS, who resigned 2 weeks ago to enter the ranks of the independent operators.

THOMAS E. KEATING, who for the past 10 years has been assistant traffic manager for Cosden Petroleum Corp., Fort Worth, Tex., resigned his position last week to become traveling agent for the Minneapolis & St. Louis Railway Co. He will work out of the company's Dallas, Tex., office but will continue to live in Fort Worth. In announcing Mr. Keating's resignation, HENRY ZWEIFEL, president of the Cosden company, also announced that the traffic department, involving four employes, would be moved to Big Spring. Cosden employes who will move with the department include DOUGLAS L. ORME, traffic manager; J. T. MORGAN, J. D. SITCHLER, and C. S. EDMONDS, JR.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

A British ship, Vedra, from Port Arthur, Tex., with a cargo of gasoline went ashore near Barrow, England. The gasoline caught fire and 36 of the crew perished.

An Oil and Gas Journal reader writes in lamenting the fact that there is no record of who drilled the first dry hole, following the Drake discovery.

20 YEARS AGO

Mackey Edgar, writing in Sperling's Journal, London, says America is rapidly running through her stores of domestic oil and is obliged to look abroad for future reserves. These reserves, he says, are owned or controlled by British capital.

Col. Patrick J. Hurley, Tulsa oil man, and Miss Ruth Wilson, daughter of Admiral and Mrs. Henry B. Wilson, were married in Washington on December 5.

Administrators of Kansas' Blue Sky law have caused the arrest of 14 salesmen hawking royalties and oil-company stock in that state.

Harry F. Sinclair and Samuel C. Hildreth have bought the famous Rancocas farm near Trenton, N. J. It has been a stock farm since 1873 when Pierre Lorillard bought it, and Messrs. Sinclair and Hildreth will continue it as such.

10 YEARS AGO

Col. Patrick J. Hurley, former Tulsa oil man, is made secretary of war in the cabinet of President Hoover.

A 36,000-bbl. well is completed on the Fortson lease in the Oklahoma City field. O. L. Cordell and Charles P. Dimit are made vice presidents and directors of the Independent Oil & Gas Co., which company is headed by Waite Phillips.

Market price of 20 representative petroleum stocks on New York exchanges averaged $50.60 per share on December 6.

SYDNEY E. MIX, zone geologist with the Gulf Refining Co., Shreveport, La., terminated 20 years of employment with that company on December 1 when he resigned to enter consulting work in Shreveport.

DR. E. R. SMOLEY, of the Lummus Co., will address meetings of the Department of Manufacture, National Petroleum Association, on gasoline processing developments in Bradford, Pa., December 6, Oil City, Pa., December 7, and Butler, Pa., December 8.

P. C. MURPHY, division manager; MAYNARD H. STEIG, division geologist, and ELTON RHINE, superintendent of the land department, Phillips Petroleum Co., Houston, Tex., were among those who attended the celebration at Bartlesville, Okla., of the birthday anniversary of Frank Phillips, founder of the company.

STANLEY GILL, consulting geologist of Houston, Tex., delivered a paper on "The Difficulties Encountered in the Planning and Efficient Operations of Recycling Properties," at the monthly meeting of the Gulf Coast chapter of the American Institute of Mining and Metallurgical Engineers at Houston December 6.

DR. ROBERT E. WILSON, president of the Pan American Petroleum & Transport Co., New York, spent several days the past week in Houston and Texas City, Tex., visiting offices of subsidiary companies. He was particularly interested in the new hydroforming unit to be built at the Texas City refinery of the Pan American Refining Co.

In Oil Industry 75 Years

Three-quarters of a century of association with the oil industry will be recorded by the Clinger family, of Warren, Pa., in 1940. Amos Clinger entered the oil business in 1865, at the close of the Civil War. His grandson, W. F. Clinger, is serving his third term as president of the Pennsylvania Grade Crude Oil Association.

W. F. CLINGER

W. F. (William Floyd) Clinger was born in Fagundus, an early oil town in Warren County, Pennsylvania, in 1891. After graduating from the Tidioute, Pa., high school he entered the University of Pennsylvania, Philadelphia. Upon graduation he took up newspaper work and from 1916 to 1922 he was editor and publisher of the Warren Evening Mirror. In the latter year he and his uncles, A. V. Clinger, George Clinger, and J. B. Taggart, formed the Clinger Oil & Gas Co. Among the properties which this company operates is the one on which Amos Clinger began his oil career almost 75 years ago.

Outside of oil Mr. Clinger's chief interest lies in education. He is president of the Warren School Board, of which he has been a director 13 years, and he is a director of the Pennsylvania State School Directors Association. Besides being president of the Pennsylvania Grade Crude Oil Association and the Clinger Oil & Gas Co., Mr. Clinger is treasurer of the Superior Oil Works, Warren. He is a director of the Independent Petroleum Association of America, the American Petroleum Institute, and the Warren Bank & Trust Co.

DON T. ANDRUS, member of the board of directors of the Bradford District Oil Producers Association, and Mrs. Andrus have returned from a trip to California.

E. L. McMILLEN, superintendent of production for Sinclair Prairie Oil & Gas Co. in Breckenridge, Tex., district for 20 years, has been transferred to the Odessa, Tex., district.

J. W. SINCLAIR, of Standard Vacuum Oil Co., with offices in Calcutta, India, arrived in Los Angeles, Calif., a few days ago and will take an extended vacation before returning to his office.

HARRY C. MILLER, general manager of Pure Oil Co.'s telephone and telegraph lines with headquarters in Chicago, has retired after 22 years' company service. THOMAS F. DAUGHERTY has been appointed superintendent of leased telegraph lines and will be stationed in the company's general offices in Chicago.

E. E. SLINGERLAND and W. W. WALCHLI have been elected treasurer and assistant secretary, respectively, of the Allegany Refiners, Inc., Bolivar, N. Y. Reelected were A. L. SHANER, president; D. V. McCARTHY, first vice president; C. A. CHIPMAN, second vice president and treasurer, and HUGH ARNOLD, assistant treasurer.

J. A. LA FORTUNE, vice president of the Warren Petroleum Corp., has been named chairman of the natural gasoline committee for the May 1940 International Petroleum Exposition, W. G. Skelly, president of the oil show, announced. Entertainment, meetings, and special events will be handled through his committee, which will be appointed later.

DON R. GLADNEY, general claim agent for Magnolia Petroleum Co., Dallas, Tex., delivered an address on the problems and workings of the claims department of the company before a meeting of the Magnolia Young Men's Club in Dallas Monday evening. The club is composed of the younger members of the Magnolia Petroleum Co.'s Dallas, Tex., office.

SHIFTS: W. F. BORDEN, vice president, Barnsdall Oil Co., from Fellows, Calif., to Goleta, Calif.; D. H. FORTINE, engineer, Barnsdall Oil Co., from Goleta, Calif., to Compton, Calif.; C. A. LANGSTOFF, superintendent, Barnsdall Oil Co., from Goleta, Calif., to Compton, Calif.; M. A. TIBBETTS, geologist, from Marianna, Ark., to Greenwood, Miss.; F. K. SPARAGINS, engineer, Carter Oil Co., from Carmi, Ill., to Mount Vernon, Ind.; ED SIBERTS, geologist, Kingwood Oil Co., from Grayville, Ill., to Effingham, Ill.; CARL WARNER, engineer, Shell Oil Co., Inc., from Culver, Ind., to Bartlesville, Okla.; IVAN J. FENN, geologist, Subterrex Co., from Beaumont, Tex., to Houston, Tex.; DONALD E. MATHES, geologist and scout, Republic Production Co., from Houston, Tex., to De Quincy, La.; CHARLES B. JOHNSON, JR., engineer, Barnsdall Oil Co., from Victoria, Tex., to Thibodaux, La.; J. R. RANDOLPH, engineer, Carter Oil Co., from St. Elmo, Ill., to Effingham, Ill.; C. E. McPOLAND, superintendent, Sinclair Refining Co., pipe-line department, from Kansas City, Mo., to Miami, Fla.; C. A. PAGE, JR., engineer, Socony-Vacuum Oil Co., from Tulsa to Mount Vernon, Ill.

F. S. WADE, president of Southern California Gas Co.; A. B. MACBETH, former president of the same company and a director of Union Oil Co.; C. O. G. MILLER, president of Pacific Lighting Corp., of San Francisco; HARRY J. BAUER, president of Southern California Edison Co.; ARTHUR F. BRIDGE, vice president and general manager of Southern California Gas Co.; HARRY L. MASSER, executive vice president of Southern California Gas Co.; N. R. McKEE, vice president of Southern Counties Gas Co.; LEROY M. EDWARDS, vice president and special counsel of Southern California Gas Co.; WILLIAM MOELLER, JR., and T. J. REYNOLDS, vice presidents of Southern California Gas Co.; L. P. ST. CLAIR and other oil men attended the services for Addison B. Day, retired chairman of the board of Southern California Gas Co., who died suddenly during the week.

F. E. BARNHART, Seville, Ohio, drilling contractor, is on vacation with his family in the Rio Grande Valley of Texas.

LESLIE S. HARLOWE, geologist with the Grogan Oil Co., Shreveport, La., is making a field trip through Illinois and Indiana.

H. D. BROWN, JR., superintendent, Brundred Oil Corp., addressed the Pennsylvania Grade Crude Oil Association producers' forum on "Safety" November 29.

H. F. MILLER, director of Carter Oil Co. in charge of crude-oil marketing, accompanied by Mrs. Miller, is enjoying a Caribbean cruise. They will return before Christmas.

BEN WITT, scout with Amerada Petroleum Corp., has returned to Shreveport, La., from Mississippi. His place there is taken by Bill Sinclair, transferred from Tulsa.

R. W. JEUTTER, of Duke Center, Pa., well-known northern Pennsylvania oil producer, has been elected to the board of directors of the First National Bank of Port Allegany.

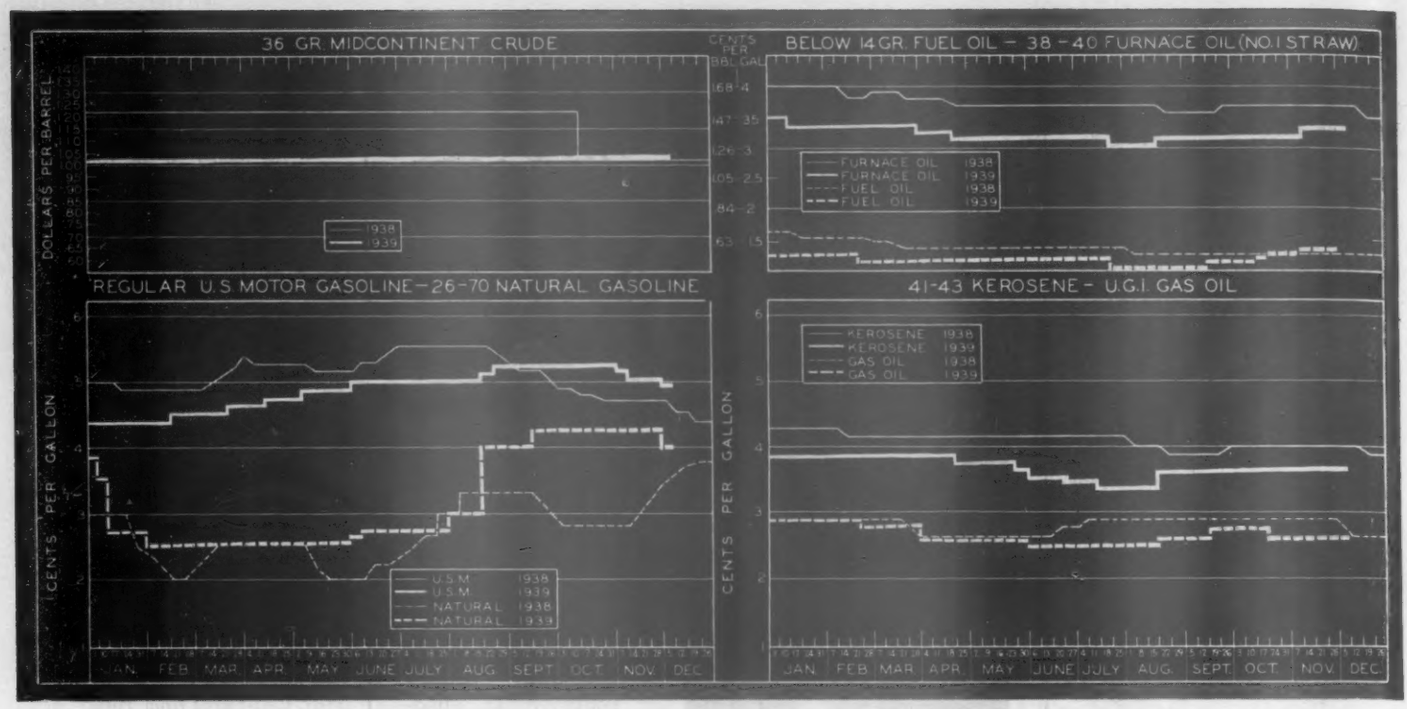
C. C. HOGG, general manager, National Petroleum Co.; W. E. FERTIG, superintendent, and ROY E. BAILEY, both of Pleasantville, Pa., are spending the first week of December at Mr. Fertig's hunting lodge in South Carolina.

P. E. LANGLEY, Sun Oil Co., has been elected president; BENNIE KRAHN, Texas Gulf Producing Co., vice president; FRAN EVERS, Superior Oil Co., secretary-treasurer; ROBERT MOCK, Houston Oil Co., chairman executive committee, and E. N. PINKARD, Pure Oil Co., sergeant-at-arms, of the Texas Gulf Coast Oil Scouts Association.

ROBERT W. YOUNG, who joined the staff of the Pennsylvania Grade Crude Oil Association last month, has assumed his post as manager of the New England territory.

L. A. WILLIFORD, of Macmillan Petroleum Corp., relinquished the gavel to H. A. LAPHAM, of Union Oil Co., who acted as chairman of the evening at the last monthly meeting of the Los Angeles Petroleum Accountants Society. DAVE KILGOUR, of California Oil and Gas Association, former president of the society and present chairman of the publicity committee, is arranging the annual Christmas jinks.

E. O. BENNETT, engineer and authority on gas recycling and pressure maintenance, with the Continental Oil Co., spoke before 120 interested listeners in Tulsa Monday night as guests of the Tulsa Engineers Club. His talk was informal and was primarily a question-and-answer affair, the questions being prompted by his showing 30 selected slides which revealed the work of the company in coastal Louisiana and Texas, where it has developed large areas for gas recycling, repressuring, distillate recovery, and pressure maintenance.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Gasoline Quotations Drop in Group 3 Market; Naturals Off Quarter Cent

By T. F. SMILEY

GASOLINE was exploring still lower depths in the Group 3 market this week. Its remaining strength — there hadn't been much — waned with the close of the football season. Naturals, wavering for weeks, lost a quarter cent. The furnace oils were firmer. Lubricants and wax, long market leaders, were not giving an inch.

New signs of softness in gasoline included an increase in urgent offerings, further crumbling of quotations, and a disposition to close plants or make sharp reductions in output rather than continue to pile up burdensome inventories. The plant of Terminal Refining Corp., Corpus Christi, Tex., with daily crude capacity of 12,000 bbl., was reported to have shut down until market conditions improve.

Jobbers Are Wary

Jobbers were buying with caution, adding nothing to their stocks unnecessarily. Some explained that in the event of an early reduction in freight rates they might incur loss by stocking up now, although such information as was obtainable indicated there would be no revision of freight rates before the turn of the year. Belief that gasoline quotations might sink still lower kept others out.

Such deep-cutting concessions were being granted by refiners who had to move their output promptly that in many instances published prices bore only a faint resemblance to those actually figuring in transactions. According to reports, some refiners let regular-grade gasoline go at 4½ cents to jobbers and 4⅝ cents to resellers.

Growing troubles of the natural gasoline market were ascribed for the most part to the shortage of tankers for transportation of either natural gasoline or finished motor fuel from the Gulf to the East Coast. There was important business available, manufacturers said, but boats with which to take advantage of it were lacking. As a result the output of small casing-head plants, formerly readily absorbed, has been pressed to find outlets in the past week.

The shortage of tankers grows out of war conditions, which have dislocated shipping schedules generally. Furthermore, a substantial number of tankers formerly employed in coastwise trade have been transferred to other waters. Idle foreign tankers cannot be put into service owing to the law that prohibits ships of foreign registry from plying between American ports.

Buyers on the East Coast were said to be anxious to get gasoline that has accumulated at Gulf ports. Gulf Coast refiners do not care to buy natural with which to help fill East Coast needs until they have assurance that they can ship the finished product when it is ready. At least one cargo of straight natural gasoline was wanted for December shipment to the East Coast, but transportation for it was not yet in sight.

Lubricants Maintain Vigor

Lubricating oils were maintaining all the vigor they have displayed since mid-September. It is evident that these oils ordered by foreign buyers are being shipped, although the refiners do not know what boats take them or the flag under which the boats sail. The increase in October export shipments over September, as shown in figures released by the Western Petroleum Refiners Association, is almost startling. In the case of steam-refined stock the gain was 349.4 per cent; viscous neutrals, 187.1 per cent; bright stock, 144.1 per cent. October export shipments of bright stock were 445.8 per cent higher than those in the corresponding month of 1938; viscous neutrals, 199.3 per cent higher. These figures go far toward explaining the remarkable change in the fortunes of the lubricants in the past 4 months.

Tightness of the wax market was increasing, and prices took another jump. Quotations on heating oils were poised for a hop to higher levels, refiners said.

Refined Oil Market Barometer

Addition of almost 2,000,000 bbl. to gasoline stocks in one week helped further to depress the market. Firmness of heating oils, lubricants, and wax continues, with signs that heating oils and wax in particular will be increasingly tight. Although potential demand for natural is substantial, the market is soft, owing to deranged transportation facilities.

MID-CONTINENT. Gasoline weak. Heating oils gaining. Lubricating oils and wax strong.

EAST COAST. Gasoline steadier. Light fuels and kerosene buoyant. Residual fuels strong.

GULF COAST. Gasoline weak. Fuel oils, diesels and other burning oils scarce.

PENNSYLVANIA. Gasoline off. Bright and cylinder stocks stronger, with prices up.

CALIFORNIA. Gasoline soft. Natural weak. Gas oil and diesel stronger.

CHICAGO. Gasoline quotations decline. Heavy fuels active. Tractor fuels doing better.

Kerosene and Fuel Oils Rise in Atlantic Coast Markets

By H. STANLEY NORMAN

NEW YORK, Dec. 5.—Kerosene and light fuel oils were advanced in the New York and other North Atlantic seaboard tank-car markets last week a tenth of a cent per gallon. In view of comparatively snug stocks and the higher demand in virtually all northeastern markets so far this early part of the winter, the advance last week, made effective by most suppliers on November 29, was not surprising.

Furthermore, another sharp advance in the tanker-charter rates in the Gulf-to-north-of-Hatteras run lifted the cost of replacing stocks another peg. Owners of dirty boats were asking from 53 to 54 cents per barrel for prompt loading on the Gulf, and tonnage was reported difficult to locate even at those figures. A clean boat was chartered for January loading last week at 52 cents per barrel. The widespread chartering activity during the middle of November for trips between the North Atlantic Coast and the Netherland West Indies during December and January removed much of the available tonnage from the open market. Current tanker-charter rates are up almost 10 cents per barrel compared to prices paid as recently as 2 weeks ago.

Some northeastern distributors are attempting to withhold shipping orders to Gulf Coast refiners until February with the expectancy that boats will be more freely offered after the temporary bulge in foreign service caused by the approaching reduction of excise duty on crude and fuel oil. Last week's advance in the tank-car price of No. 2 fuel oil and kerosene elevated the products in the New York market to 4.7 and 5.2 cents, respectively. Sellers report the demand for all grades of light fuel oil is growing from week to week, and this condition has not served to lower the concern over supplies in the late part of the winter. Despite the continued high rate of refinery throughput, the resultant sharp increase of gasoline stocks, and the related softening of motor-fuel prices, there has been no appreciable gain registered on light fuel-oil stocks. The domestic gas-oil and distillate fuel-oil inventory remains more than 1,550,000 bbl. behind the comparable 1938 stocks, and concern is growing that gasoline accumulations will exert further pressure on the motor-fuel market. The concern is based on the assumption that refinery operations will be continued at a rate dictated by the demand for light fuel oils.

Upward movement of the tanker-charter rates has precipitated a paradox between the Gulf Coast and northeastern motor-fuel markets. Several grades of gasoline are available on the Gulf at an eighth of a cent per gallon less than a week ago, but the market in this section of the country is showing a tendency to move upward. The advance of a tenth of a cent per gallon in the consumer tank-car market throughout the New York and New England territory, with the exception of western New York, posted November 27 by Socony-Vacuum Oil Co., Inc., has been well supported. The gasoline-market movement late last month included an advance of three-tenths of a cent per gallon in the New York tank-wagon and retail structure. However, the tank-wagon price structure elsewhere in this territory was not advanced in line with the tank-car market.

Most distributors in this section and refiners with facilities on both the Gulf and Atlantic coasts reported last week that leaded gasoline was generally down an eighth of a cent on the Gulf. Unleaded motor fuel appears to be in stronger demand, and prices for this class of material have resisted current pressure.

Residual fuel-oil markets are strong on the North Atlantic seaboard, and refiners report that large consumers are executing contracts rapidly on the basis of higher maximum prices for the first 6 months and also for the last half of the year. Some suppliers are extending contract privileges to customers for only 6 months and have reserved decision on market conditions for the last half of the year. Currently, Bunker C fuel oil is quoted at $1.15 per barrel in New York, Boston, Providence, Philadelphia, and Baltimore. The first impact of curtailed demand for ship's bunkers resulting from the revised Neutrality Act has been absorbed by the industry and consumption is again said to be satisfactory. Suppliers in New York and other North Atlantic seacoast terminals are generally quoting 6½ cents per gallon for 65-octane gasoline and above. Prospects are that this figure will be at least maintained for the next few weeks in view of the tanker-charter market. Gulf Coast prices would have to drop considerably below their current levels to permit any downward change at northern ports.

Under the pressure of continued firm demand from regular customers and spot export buyers, Pennsylvania Grade lubricating oils maintained their strong market position. Advances ranging up to a cent per gallon have been made by some suppliers on the low side of the market, but the top quotations are unchanged from those of recent weeks. Refiners continue their recent policy of limiting shipments to contract customers, and spot purchasers report difficulty in locating suppliers in position to quote on even small orders.

Wax quotations in New York range from 6½ to 7 cents, with most of the domestic business transacted at the lower figure and the higher applying to export.

Gulf Coast Markets

HOUSTON, Tex., Dec. 5.—With unsold stocks of gasoline continuing to pile up and no immediate relief materializing, uneasiness in the Gulf Coast markets is beginning to reach such a point that refiners no longer quibble over prices. Orders are the urgent need and although nominal quotations are being maintained, it is freely admitted by practically all suppliers that these quotations do not represent the actual state of the market.

Continued strength, however, is being displayed by other products. Fuel oils, diesels, and other burning oils are definitely scarce, with sellers able to move quickly any supplies they might get their hands on. It is the demand for these oils that is a contributing factor to the piling up of gasoline stocks. Anxious to take care of the demand for fuels and such oils, refiners are being forced to produce gasolines for which they have no demand. Kerosenes can be obtained from several sources, but not in large volume from any one source, and sellers' prices rule without question.

Inquiries for coastal lubricating stocks keep coming in. Although no further price increases have been indicated, there is no material of any grade available for prompt or early shipment, and sellers are having difficulty in supplying contracts.

Crude was slightly easier the past week, and several refiners have committed themselves to substantially reduced crude runs to stills during December.

A. P. I. Weekly Refinery Statistics

Week ended December 2, 1939

	Capacity reporting (per cent)	Daily crude runs (bbl.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	533,000	17,916,000	11,445,000
Appalachian	87.3	130,000	3,129,000	702,000
Indiana, Illinois, and Kentucky	90.7	571,000	11,219,000	6,717,000
Oklahoma, Kansas, and Missouri	81.6	255,000	6,441,000	4,295,000
Inland Texas	50.3	104,000	1,686,000	2,182,000
Texas Gulf	90.0	798,000	11,326,000	11,927,000
Louisiana Gulf	97.8	114,000	2,517,000	2,866,000
North Louisiana and Arkansas	55.0	42,000	367,000	836,000
Rocky Mountains	54.2	46,000	1,061,000	576,000
California	90.0	522,000	15,353,000	91,321,000
Total reported	86.4	3,115,000	71,015,000	132,867,000
Estimated unreported	.....	365,000	5,350,000	3,095,000
*Estimated total	.....	3,480,000	76,365,000	135,962,000
*Estimated total previous week	.....	3,510,000	75,595,000	138,064,000
*December 1, 1938	.....	3,160,000	69,673,000	151,617,000

*Bureau of Mines, currently estimated.

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATE)

Week ended November 25, 1939	231,811,000 barrels
Week ended November 18, 1939	229,835,000 barrels
Week ended November 26, 1938	270,563,000 barrels

Figures do not include stocks of heavy, unrefinable California crude.

Retail Oil Markets

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of December 5, 1939

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Dir.	Inc. tax	tank wag.
Chicago, Ill.	15.1	13.1	4.0	10.0
Decatur	15.1	12.1	4.0	8.5
Joliet	15.1	13.6	4.0	10.0
Peoria	15.1	12.7	4.0	10.0
Quincy	14.9	13.4	4.0	9.8
Davenport, Ia.	15.1	13.6	4.0	‡10.0
Des Moines	14.9	13.4	4.0	‡9.8
Mason City	15.3	13.8	4.0	‡10.2
Duluth, Minn.	16.9	15.4	5.0	10.8
Mankato	16.5	15.0	5.0	9.9
Minneapolis	16.5	15.0	5.0	10.4
LaCrosse, Wis.	16.5	15.0	5.0	10.4
Green Bay	16.9	15.4	5.0	10.0
Milwaukee	16.3	14.8	5.0	10.2
Detroit, Mich.	13.6	12.1	4.0	7.6
Grand Rapids	14.0	12.5	4.0	9.7
Saginaw	14.8	13.3	4.0	9.3
Evansville, Ind.	16.6	15.1	5.0	†10.5
Indianapolis	16.8	14.3	5.0	†10.0
South Bend	16.8	15.3	5.0	†10.0
Fargo, N. D.	17.7	16.2	5.0	11.8
Huron, S. D.	17.0	15.5	5.0	10.9
Kans. City, Mo.*	14.4	12.9	4.0	8.0
St. Louis*	14.7	13.2	4.0	8.0
St. Joseph	14.4	12.9	4.0	7.9
Wichita, Kans.	13.3	11.1	4.0	7.9

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Does not include 3-cent state tax.

Exclusive of state general sales taxes.

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gal. or more, 1.5 cents off; minimum delivery 25 gal.

Stanolex Fuel Oil in Chicago

Effective September 18, 1939, f.o.b. Chicago tank-wagon prices: Standard range oil, 1-99 gal., 9 cents; 100-149 gal., 8 cents; 150 gal. and over, 7.5 cents. Stanolex fuel oil No. 1, 1-149 gal., 8.25 cents; 150-399 gal., 7.25 cents; 400 gal. and over, 6.75 cents. Stanolex furnace oil, 1-149 gal., 8.25 cents; 150-399 gal., 7.25 cents; 400 gal. and over, 6.75 cents. Stanolex Grade A, 1-399 gal., 5.25 cents; 400 gal. and over, 4.25 cents. Stanolex Grade B, 1-799 gal., 5.25 cents; 800 gal. and over, 4.25 cents. Stanolex Grade C, 1-999 gal., 4.5 cents; 1,000 gal. and over, 3.5 cents.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank-wag. cons'r.	Divided dir.	Inc. tax	tank wag.
Ohio points	16.0	15.0	5.0	*13.0

*Includes state tax of 1 cent.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Cons'r. tank car	Dir. tank wag.	Inc. tax	tank wag.
Atl'tic City, N. J.	11.6	12.7	4.0	7.60
Newark	11.6	12.7	4.0	7.60
Annapolis, Md.	13.35	14.35	5.0	9.5
Baltimore	12.75	13.75	5.0	7.5
Cumberland	14.15	16.15	5.0	10.0
Wash'gton, D. C.	11.00	12.0	3.0	9.5
Danville, Va.	14.96	17.45	6.0	12.9
Norfolk	13.75	16.25	6.0	11.0
Petersburg	14.05	16.55	6.0	11.7
Richmond	14.05	16.55	6.0	10.7
Roanoke	15.25	17.75	6.0	11.0
Charles'n, W. Va.	14.55	17.05	6.0	12.6
Parkersburg	13.85	15.35	6.0	11.2
Wheeling	14.85	16.75	6.0	12.2
Charlotte, N. C.	16.90	18.40	7.0	11.8
Hickory	17.45	18.95	7.0	12.3
Mt. Airy	17.30	18.80	7.0	12.2
Raleigh	16.65	18.15	7.0	11.5
Salisbury	16.95	18.45	7.0	11.9
Charleston, S. C.	14.75	17.25	7.0	10.6
Columbia	15.60	18.10	7.0	11.5
Spartanburg	16.30	18.80	7.0	12.2

Price basis to Essolene undivided dealers: Dealer tank-wagon price less 0.5 cent per gallon. Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gal., consumer tank-wagon price at time and place of delivery; 100,000 gal. per year, consumer tank-car price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective January 16, 1939, in North Carolina the commercial consumer schedule became as follows: Single deliveries of 50 gal. or more, consumer tank-wagon price. Single deliveries of less than 50 gal., 4 cents per gallon over consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price, less .5 cent per gallon. The above policy also applies in South Carolina effective January 23, 1939.

Discounts for kerosene, 1 cent off tank-wagon price for 25 gal. or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero.
	Cons'r. tank wag.	Net dlr.	Inc. tax	tank wag.
Atlanta, Ga.	21.0	18.0	7.0	9.0
Augusta	20.5	17.5	7.0	10.0
Macon	21.0	18.0	7.0	10.5
Savannah	19.5	16.5	7.0	9.0
Birmingham, Ala.	21.5	18.5	8.0	9.0
Mobile	21.5	18.5	9.0	9.0
Montgomery	22.5	19.5	9.0	11.0
Jackson, Miss.	19.5	16.5	7.0	10.0
Vicksburg	19.5	16.5	7.0	9.5
Jacksonville, Fla.	19.0	16.0	8.0	8.0
Miami	20.0	17.0	8.0	7.0
Pensacola	21.5	18.5	9.0	8.5
Tampa	20.5	17.5	8.0	8.5
Lexington, Ky.	19.5	16.5	6.0	10.0
Covington	18.0	15.0	6.0	9.5
Louisville	18.5	15.5	6.0	9.0
Paducah	18.5	15.5	6.0	9.0

Price basis to tank-wagon consumers: Effective January 4, 1937; 3 cents per gallon below tank-wagon price.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent. All are included in the table.

Pennsylvania and Delaware

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Cons'r. tank car	Dir. tank wag.	Inc. tax	tank wag.
Philadelphia, Pa.	12.0	13.5	5.0	10.0
Pittsburgh	13.0	14.5	5.0	10.5
Allentown	12.5	14.0	5.0	10.5
Erie	13.0	14.5	5.0	10.0
Scranton*	13.0	14.5	5.0	10.5
Altoona	13.0	15.0	5.0	10.5
Dover, Del.		14.0	5.0	10.5
Wilmington		13.5	5.0	9.75

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon.

*Voluntary discount of 1 cent allowed to dealers only.

Discount on kerosene, 2 cents per gallon off tank-wagon price on tank-wagon deliveries of 25 gal. or more at one time.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank truck	Serv. sta.	Inc. tax	tank wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	10.0
Fresno, Calif.	18.5	19.5	4.0	12.5
Phoenix, Ariz.	20.0	21.0	6.0	*17.5
Reno, Nev.	20.5	21.5	5.0	13.5
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle, Wash.	20.0	21.0	6.0	†13.75
Spokane	21.5	22.5	6.0	†16.75
Tacoma	20.0	21.0	6.0	†13.75

*Includes 5-cent state tax. †Includes 0.25-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gal. and over, advance quantity discount extended at time of delivery, 2 cents. Service-station schedule applies on single deliveries less than 40 gal. On kerosene in tank-car, transport-truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank wagon.

March 18, 1939, split dealer discount was canceled.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Cons'r. tank car	Dir. tank wag.	Inc. tax	tank wag.
Albany	12.6	14.6	5.0	7.80
*Met. N. Y.: Manhat., Bronx Queens, Br'klyn Staten Island	12.7	13.7	5.0	8.00
Buffalo	13.1	14.5	5.0	7.70
Rochester	13.3	14.0	5.0	8.30
Syracuse	13.2	14.5	5.0	8.30
Boston	11.5	13.0	4.0	8.00
Portland, Me.	12.6	14.3	5.0	8.00
Manchester, N. H.	13.3	15.0	5.0	8.40
Burlington, Vt.	13.1	15.2	5.0	8.20
Spring'fld, Mass.	12.2	13.0	4.0	8.20
Worcester	12.1	13.5	4.0	8.20
Hartford, Conn.	11.9	13.3	4.0	7.90
New Haven	11.8	12.8	4.0	8.00
Providence, R. I.	11.5	13.3	4.0	8.00

*Does not include 2 per cent city sales tax, which is calculated on basis of net retail price exclusive of state and federal taxes. Metropolitan New York prices are undivided dealer prices; others are split dealer.

Effective February 15, 1939, the company changed its commercial consumer policy in New York and New England points for tank-wagon delivery to the following: Annual purchases 10,000 gal. and under, tank-car price plus 2 cents per gallon; annual purchases 10,000 gal. up to 50,000 gal., tank-car price plus 1.5 cents per gallon; annual purchases 50,000 to 200,000 gal., tank-car price plus 1 cent per gallon; annual purchases 200,000 gal. and over, tank-car price plus ⅛ cent per gallon. Private consumers pay undivided dealer price, plus 2 cents per gallon. Private consumers receiving full compartment deliveries of at least 200 gal. receive a discount of ⅛ cent per gallon.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wag.	Dir.	Inc. tax	tank wag.
Denver, Colo.	15.5	....	5.0	11.5
Grand Junction	18.5	....	5.0	15.0
Pueblo	16.0	....	5.0	9.0
Casper, Wyo.	17.5	....	5.0	11.5
Cheyenne	15.5	....	5.0	13.0
Billings, Mont.	18.5	....	6.0	13.0
Butte	20.0	....	6.0	15.5
Great Falls	19.5	....	6.0	15.5
Helena	20.5	....	6.0	15.5
Salt Lake, Utah	13.5	13.5	5.0	16.0
Boise, Idaho	21.1	21.1	6.0	18.0
Twin Falls	21.1	21.1	6.0	18.0
Albu'que, N. M.	17.0	17.0	6.5	10.0
Roswell	16.0	16.0	6.5	8.0
Santa Fe	17.5	17.5	6.5	10.0

*Includes city tax of 0.5 cent. †Includes state tax of 1 mill.

Tank wagon represents price to consumers. Dealer represents price to dealers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Cons. tank car	Dir. tank wag.	Inc. tax	tank wag.
New Orleans, La.	15.25	17.75	8.0	†11.0
Baton Rouge	15.25	17.75	8.0	‡10.5
Alexandria	15.25	17.75	8.0	‡12.5
Lafayette	15.00	18.00	8.0	‡11.0
Lake Charles	15.25	17.75	8.0	‡12.5
Shreveport	14.00	16.50	8.0	‡11.0
Knoxville, Tenn.	18.00	20.50	8.0	13.0
Memphis	16.00	18.50	8.0	11.0
Chattanooga	17.50	20.00	8.0	12.0
Nashville	17.50	19.50	8.0	11.0
Bristol	18.25	17.75	8.0	13.0

Essolene at dealer price less 0.5 cent per gallon to undivided dealers.

†Includes 1-cent parish tax and 1-cent state tax. ‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gal. or more in one territory take posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gal. at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less 0.5 cent per gallon. Kerosene prices include 1-cent state tax.

Effective February 24, 1939, the company reestablished in New Orleans the commercial consumer policy on motor fuel effective in the rest of the state.

Effective December 12, 1938, the company revised its commercial consumer policy on motor fuel in New Orleans, as follows: Single deliveries of less than 50 gal., consumer tank car plus 2 cents per gallon 50 to 199 gal., consumer tank car plus 1 cent per gallon; 200 gal. and over, consumer tank car plus 0.5 cent per gallon.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Dir.	Inc. tax	tank wag.
Omaha	16.5	15.5	6.0	9.5
McCook	16.5	14.4	6.0	9.0
Norfolk	17.5	15.5	6.0	9.5
North Platte	17.5	15.9	6.0	10.0
Scottsbluff	18.5	15.5	6.0	11.4

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Tank-wg. dlr.	Includes tax	tank wag.
Texarkana, Ark.	14.0	5.0	8.0
Fort Smith	14.5	5.0	7.5
Little Rock	17.25	7.5	8.0
Muskogee, Okla.	13.0	5.0	7.0
Oklahoma City	11.0	5.0	6.5
Tulsa	12.0	5.0	7.5

The tank-wagon price is the price to all classes of trade.

Texas

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Dallas, Tex.	12.0	16.0	5.0	7.0
Fort Worth	15.0	19.0	5.0	8.0
Houston	14.0	18.0	5.0	8.0
San Antonio	14.0	18.0	5.0	8.0

Canada

3-Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank wag.	Inc. tax	Kero. tank wag.
Halifax, N. S.	24.5	10.0	18.5
St. John, N. B.	24.5	10.0	18.5
Montreal, Que.	23.0	8.0	15.5
Toronto, Ont.	23.5	8.0	16.0
Hamilton, Ont.	23.5	8.0	16.0
Winnipeg, Man.	26.5	7.0	20.5
Brandon, Man.	28.0	7.0	22.9
Regina, Sask.	25.5	7.0	20.5
Saskatoon, Sask.	28.0	7.0	23.0
Edmonton, Alta.	25.9	7.0	20.9
Calgary, Alta.	23.0	7.0	18.0
Vancouver, B. C.	23.0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon prices. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	16.2
V.M.&P. naphtha	16.5
Cleaners' naphtha	15.5
Stanisol	15.5

*Prices include 3-cent Illinois tax but not 1-cent federal tax nor 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gal. lots if covered by contract.

Tank-Wagon Changes

Standard Oil Co. of Louisiana November 24 reduced consumer tank-car gasoline 0.5 cent in Knoxville, Memphis, Chattanooga, Nashville, and Bristol; same date, reduced dealer tank-wagon gasoline 0.5 cent in Knoxville, Memphis, and Nashville.

Standard Oil Co. (Indiana) November 11 reduced dealer gasoline 1 cent in Detroit; November 18, advanced dealer gasoline 1.7 cents in Detroit and reduced tank-wagon kerosene 0.7 cent in Indianapolis; November 20, reduced dealer gasoline 1 cent in Indianapolis; November 21, reduced dealer gasoline 0.9 cent in Peoria; November 22, advanced tank-wagon and dealer gasoline 0.5 cent in Grand Rapids.

Socony-Vacuum Oil Co., Inc., November 27, advanced consumer tank-car gasoline prices 0.1 cent per gallon in Albany, New York, Syracuse, Boston, Portland, Manchester, Burlington, Spring-

(Continued on Page 105)

Prices of Refined Products

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of December 5, 1939

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents a gallon on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below	.04⅛	.04¼
63-66 octane	.04⅜	.04½
67-69 octane	.04¼	.04⅝
70-72 octane (regular)	.04⅝	.05
60-62 400 grades:		
62 octane and below	.04⅛	.04¼
63-66 octane	.04⅜	.04½
67-69 octane	.04¼	.04⅝
70-72 octane (regular)	.04⅞	.05
68-70 360	.04⅞	.05⅛

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04⅛	.04¼
63-66 octane	.04⅜	.04½
67-69 octane	.04¼	.04⅝
70-72 octane (regular)	.04⅞	.05⅛
60-62 400	.04⅛	.04¼

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
62 octane and below	.04½	.05
63-66 octane	.04⅞	.05⅛
67-69 octane	no quotations	
70-72 octane (regular)	.05⅛	.05½

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
62 octane and below		.04⅜
67-69 octane	no quotations	
70-72 octane (regular)		.05¼

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04⅛	.04⅝
67-69 octane	.04⅜	.04⅞
70-72 octane (regular)	.05	.05⅛
60-62 400 grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04⅜	.04⅞
70-72 octane (regular)	.05	.05⅛
68-70 360	.05	.05¼

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor	.04⅜	.05
65 octane	.06⅝	.06¾
72-74 octane (regular)	.06	.06½

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.06	.08
58-60 400, 65 oct. and higher	.07	.09

EAST COAST (domestic)—

U. S. Motor, 65 and above:		
*New York (Bayonne)	.06⅛	.06⅜
Philadelphia	.06¼	.06⅜
Baltimore	.06¼	.06⅜
Charleston, S. C.	.06⅜	.07

*All grades of gasoline ⅛ to ¼ cent less for barge shipments. New York Harbor prices are for New York and New England delivery. Prices for New Jersey delivery ¼ cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05¼	.05⅝
65-67 octane	.05⅝	.06
68-70 octane	.06	.06¼

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04
Grade 18-55	.04⅜	.04⅞

NORTH TEXAS—

Grade 26-70		.03⅝
Grade 18-55		.04⅛

CALIFORNIA—

75-85 375-390	.05½	.06

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70		.04⅝

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110-flash, 540-550 e.p.	.03¼	.03⅜
41-43 gr., 300-320 i.b.p., 110-125 flash, 500-520 e.p.	.03⅝	.03⅝
46-48 gr., 210-230 i.b.p., 480-max., e.p.	.03⅝	.04¼

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅝	.03⅞
42-44	.03¾	.04

NORTH TEXAS—

41-43	.03⅝	.03¾

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.03½	.03⅝

ARKANSAS (Ark. and N. La. del.)—

41-43		.03⅝

PENNSYLVANIA (inland refineries)—

45	.04¾	.05
46	.04⅞	.05⅛
47	.05	.05¼

CHICAGO (Based on Group 3)—

41-43	.03⅝	.03⅞
42-44	.03¾	.04

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04½	.05¾

NEW YORK (Bayonne, N. J.)—

41-43	.04⅞	.05

***GULF COAST (domestic)—**

41-43	.04½	.04¾

*Barge price ⅛ cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.03½	.03¾
No. 1 prime white, 38-42	.03¼	.03½
No. 1 straw, 38-40	.03¼	.03½
No. 2 straw, 32-36	.03¼	.03½
No. 2 dark, 32-36	.03⅛	.03¼
No. 3 zero to 15, 28-32	.03	.03⅛
No. 3, 15 and above, 28-32	.02¾	.03

NORTH TEXAS—

No. 1 prime white, 38-42	.03½	.03⅝
No. 1 straw, 38-40	.03⅜	.03½

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2, 32-36	.03	.03⅛

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36		.03⅜

CHICAGO (Based on Group 3)—

Range oil	.03½	.03¾
No. 1 prime white, 38-40	.03½	.03⅝
No. 1 straw, 38-40	.03⅜	.03½
No. 2 straw, 32-36	.03¼	.03⅜
No. 2 dark, 32-36	.03¼	.03½
No. 3, zero to 15, 28-32	.03¼	.03½
No. 3, 15 and above, 28-32	.02⅝	.03

NEW YORK (Bayonne, N. J.)—

*No. 1	.04⅜	.05
*No. 2	.04⅝	.04½
*No. 4	.04¼	.04½

*Barge deliveries ⅛ to ¼ cent under above tank-car price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil, under 35	.02⅝	.02¾
No. 5, low pour point, 18-22	.70	.75
Below 14 fuel oil, industrial	.52½	.57½

NORTH TEXAS—

U.G.I. gas oil, under 35	.02⅝	.02¾
No. 5, low pour point, 18-22	.70	.75
Below 14 fuel oil, industrial	.52½	.57½

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.70	.75

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅝	.02⅞
No. 5, low pour point, 18-22	.70	.80
No. 5, 15 and above, 18-22	.60	.70
No. 6, low pour point, 10-16	.60	.70
No. 6, 15 and above, 10-16	.45	.50

PENNSYLVANIA (inland refineries)—

36-40	.04⅛	.04½

CALIFORNIA—

Los Angeles:

30-40 gas oil, per bbl.	1.20	1.30
24 plus diesel, per bbl.	1.15	1.30
24 plus diesel (bunkers)	1.25	1.40
12-16 (bunkers at tidewater)	.70	.90
10-16 (cargo lots)	.65	.75
12-17 (tank cars)	.60	.80
10-17 (high sulfur)	.55	.70

San Joaquin Valley:

10-18 (tank cars)	.55	.75
24 plus diesel, per bbl.	1.15	1.25

San Francisco:

24 plus diesel, per bbl.	1.40	1.45
24 plus diesel (bunkers)	1.50	1.55
10-16 (bunkers)	.85	.95

GULF COAST—

No. 2 fuel		.04¼
43-47 diesel		.04
48-52 diesel		.04¼
53-57 diesel		.04½
58 and above diesel		.04¾
Bunker C (bulk cargoes)	.95	1.00
Bunker C (bunkers)	.95	1.00

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¼
28-30 diesel (lighterage 6¾c per bbl.)		1.75
28-30 diesel (tank cars)		.04⅛
Bunker C (to ocean-going ships in N. Y. Harbor)		1.15
Industrial fuel (tank cars)		.04

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

190-200 D, 15-25		.27
150-160 D, 0-10		.24
150-160 D, 15-25		.23
150-160 E, 15-25		.23
100-110 D, 0-10		.23
Steam refined:		
600 dark green (untreated)		.08

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):

10 pour point	.28	.33
15 pour point	.27	.32
25 pour point	.25	.30
Steam refined:		
600	.15⅛	.18
650	.17	.20
600 flash	.17½	.21
630 flash	.21	.24

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

0-10 pour point:		
150-3		.13
180-3		.14
180-4		.13½
200-3		.14½
200-4		.14
250-3		.16
250-4		.15½
280-3		.17
280-4		.16½
300-3½		.17½
400-3½		.18½
100-2½ paraffin oil		.07½
15-25 pour point:		
200-3		.14
200-4		.13½
250-3		.15
250-4		.14½
280-3		.16½
280-4		.16

GULF COAST—

Pale oils:		
200-3	.07¼	.07½
300-3	.07⅝	.08
500-3½	.08½	.09
750-3½	.09	.09½
1,200-3½	.09¾	.10
2,000-4		.10¾
Red oils:		
200-5-6	.07	.07¼
300-5-6	.07½	.07⅝
500-5-6	.08¼	.08½
750	.08⅝	.09¼
1,200-5-6	.09⅝	.09⅝

CALIFORNIA (moving to dom. market)—

Pale oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11½
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° F., 3 color, 400-405 flash:		
Zero pour point	.31	.32
10 pour point	.30	.31
15 pour point	.29	.30
25 pour point	.25	.28
200 vis. at 70° F., 3 color:		
Zero pour point	.33	.34
10 pour point	.32	.33
15 pour point	.31	.32
25 pour point	.27	.32

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (A.m.p.) w.c. scale		.0675

PENNSYLVANIA (inland refineries)—

122-124 (A.m.p.) w.c. scale	.0650	.0675
124-126 (A.m.p.) w.c. scale	.0650	.0675

NEW YORK—

Wax in bags fully refined:		
123-125 (A.m.p.) wax		.0505
125-127 (A.m.p.) wax		.0520
128-130 (A.m.p.) wax		.0560
130-132 (A.m.p.) wax		.0585
133-135 (A.m.p.) wax		.0615
135-137 (A.m.p.) wax		.0640
Crude scale:		
124-126 (A.m.p.) w.s.		.0600
124-126 (A.m.p.) y.s.		.0575
Petrolatum in barrels, carload lots:		
Dark green		.03½
Amber		.03⅝
Extra amber		.04
Lily white		.06½
Snow white		.07⅛
Cream		.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.05	.05¼
60-62 400	.05½	.06
65 octane	.06¼	.06½
68 octane	.06⅝	.07
70 octane	.07	.07½

LOS ANGELES—

U. S. Motor grades:		
60-65 octane	.05¼	.05⅜
65-69 octane	.05⅝	.06¼
Above 69 octane	.06¼	.06½

KEROSENE

GULF COAST—

41-43 prime white		.05½
41-43 water white		.05¾

LOS ANGELES—

41-43 water white	.05	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s.) in bbls.—

Cylinder stocks:		
600 S.R. unfiltered	.25	.26½
650 S.R. unfiltered	.27	.28½
600 flash, S.R.	.28	.30½
630 flash, S.R.	.30	.34
Bright stock:		
8 color	.40	.42

NEUTRAL OIL

200-3 color	.38	.43
150-3 color	.37	.40

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 A.m.p.		.0505
125-127 A.m.p.		.0650
128-130 A.m.p.		.0675
133-135 A.m.p.		.0750
135-137 A.m.p.		.0850
Crude scale:		
122-124 w.s.		.0600
124-126 w.s.		.0600
122-124 y.s.		.0575
124-126 y.s.		.0575

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

Ea..' Texas (Oct. 11, 1938)* $1.10
Sinclair Prairie Oil Marketing Co. October 2, 1939. DeSoto Pipe Line October 2, 1939. Cities Service Co. October 5, 1939. Shell Oil, Inc., October 5, 1939.
Van, Tex. (Oct. 11, 1938)* $0.93
Talco, Tex. (Oct. 2, 1939)* ..... .65
Rodessa, Tex. .....
See North Louisiana gravity schedule
Cass and Panola counties, Texas ..... See note below
Altus and Tipton† ..... See note below
Cayuga, Tex. (Oct. 2, 1939) $0.78
Clay Creek, Tex. ..... .85

*Humble Oil & Refining Co. †Gulf Refining Co. Pure Oil Co.'s Van price, 93 cents, effective Oct. 13, 1938.

Cass and Panola counties, Texas, effective October 12, 1938, by Magnolia Petroleum Co., same as North Louisiana prices in Column 5 in gravity schedule.

Altus and Tipton, Oklahoma, starting at below 25° at 71 cents, 2-cent spread to 40° and above at $1.03. Cayuga posted by Pan American Pipe Line Co. Clay Creek by Sun Oil Co.

West Texas

See gravity table.
Fisher County, Texas (Apr. 1, 1939) ..... See note below
Pecos County (Oct. 11, 1938)* $0.78
Pecos shallow (Oct. 11, 1938)† ..... .65

*Shell Oil Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Oil Co.

Fisher County, Texas, by Shell Oil Co., Inc., below 25°, 68 cents; 25°, 70 cents, with 2-cent spread to 40° and over at $1.

North Louisiana and Arkansas

Shreveport, La. (Sept. 7, 1939) $1.05
See note below
Smackover, Ark. (Oct. 5, 1938)* ..... .73
Buckner, Magnolia, and Village, Ark. (Oct. 5, 1938)* ..... See note below
Schuler, Jones sand (Sept. 13, 1939) .79
Schuler, Reynolds sand (Sept. 13, 1939) ..... .91
Tullos and Urania $0.80
Cotton Valley, La. (distillate) (Dec. 23, 1938)* 1.20
Lisbon, La. (Apr. 29, 1939) .....
See note below
Atlanta, Ark. (Sept. 13, 1939) ..... .93
Magnolia, Ark. (Sept. 13, 1939) ..... .93
University, La. (Sept. 11, 1939) .....
See note below

*Smackover posted by Standard Oil Co. of Louisiana, Oct. 5, 1938; by Magnolia Petroleum Co., Oct. 12; by Gulf Refining Co., Oct. 13; McMillan Refining Co. and Cross Refining Co. met price. Tullos and Urania posted by Hunt Oil Co. and Arkansas Fuel Oil Co.

The above Schuler, Atlanta, and Magnolia, Arkansas, flat prices posted by Lion Oil Refining Co. Shreveport flat prices posted by Caddo Crude Oil Purchasing Co. and Atlas Oil Corp.

Buckner, Magnolia, and Village, Arkansas prices effective Sept. 13, 1939, by Standard Oil Co. of Louisiana, start at below 25° at 63 cents, with 2 cents added for each degree up to 40 and over at 95 cents.

Effective Sept. 7, 1939, Standard Oil Co. of Louisiana posted gravity prices in Shreveport field beginning at below 25°, 73 cents; 25-25.9°, 75 cents, with 2 cents added for each degree up to 40 and over at $1.05.

In the Lisbon, Louisiana, field, effective Sept. 14, 1939, Gulf Refining Co. and Caddo Crude Oil Purchasing Co. posted 27-27.9°, 66 cents, with 2 cents added for each degree up to 35 and over at 82 cents.

In the Baton Rouge (University) field, Louisiana, effective Sept. 11, 1939, Standard Oil Co. of Louisiana posted below 20° 79 cents, with 3 cents added for each degree upward to 26-26.9° at $1, and then 2 cents added for each degree up to 40 and over at $1.28.

Southwest Texas

Salt Creek, Darst Creek, Hilbig, Carroll, Clark and Zoboroski (Oct. 11, 1938)* $0.96
Pettus (Oct. 11, 1938)* 1.29
Flour Bluff (Dec. 3, 1938)* 1.23
Jim Wells County (Oct. 2, 1939)* . 1.23
Darst Creek (Oct. 12, 1938)† ..... .96
Darst Creek and Bruner (Oct. 13, 1938)‡ ..... .96
Luling (Oct. 12, 1938)† ..... .87
Lytton Springs (Oct. 12, 1938)† ..... .90
Mirando (Oct. 12, 1938)† .....
Government Wells (Oct. 13, 1938) .....
See note below

*Humble Oil & Refining Co. †Magnolia Petroleum Co. Pettus price adopted by Atlantic Crude Oil Purchasing Co. ‡Gulf Refining Co.

Government Wells posted by Sun Oil Co. starts at 20° at 77 cents, 3-cent spread to 24°-24.9° at 89 cents.

Gulf Coast

Sea Breeze, Willow Slough, and LaBelle, Tex. (Sept. 14, 1939)*** $1.10
Conroe, Tex. (Oct. 11, 1938)* 1.27
Black Bayou and White Castle, La. (Oct. 11, 1938)† ..... See note below
Gibson, La. (Oct. 11, 1938)† $1.04
Garden Island, La. (Oct. 12, 1938)‡ .. 1.24
Lafitte, La. (Oct. 12, 1938)‡ 1.04
Cleveland, Tex. (Oct. 12, 1938)† 1.14
Schwab, Polk County (Feb. 20, 1939) 1.00
Hardin, Tex. (Sept. 14, 1939)* $1.10
Tepetate, La. (Oct. 11, 1938)§ 1.03
Villa Platte, La. (Oct. 11, 1938)§ 1.08
Abbeville, La. (Jan. 1, 1939)§ .....
See note below
Bosco, La. (Dec. 3, 1938)§ $0.93
Creole, La. (Oct. 13, 1938)§ ..... .96
Gueydan, Sweet Lake, and Louise, La. (Oct. 13, 1938)§ ..... See note below
Vinton, Edgerly, Starks, Hackberry, Timballer Bay, Quarantine Bay, and Grand Bay, La. (Oct. 2, 1939)** .....
Long Lake, Tex. (Oct. 13, 1938)** .. $1.08
Segno and Wing (Oct. 2, 1939)** .....
See note below
Livingtqn (Oct. 11, 1938)† $1.10
Gibson, La. (Oct. 11, 1938)† 1.04
Evangeline, La. (July 7, 1939) $0.96

*Humble Oil & Refining Co. †Shell Oil Co., Inc. ‡Texas Co. §Continental Oil Co. ‖Pure Oil Co. ¶Magnolia Petroleum Co. **Gulf Refining Co. ***Sun Oil Co. Hardin prices by Humble and Sun companies.

Black Bayou, etc., starts at below 20° at 79 cents; 20°-20.9°, 81 cents; 21°-21.9°, 83 cents; then a 3-cent spread to 26°-26.9°, 98 cents; then a 2-cent spread to 40° and over at $1.14. Abbeville starts at below 30°, 92 cents, 2-cent spread to 40° and over at $1.02. Gueydan, etc., starts below 20°, 79 cents, 3-cent spread to 26°-26.9° at $1, and 2-cent spread to 40° and over at $1.28. Segno and Wing take Gulf Refining Co.'s Gulf Coast prices. Vinton, Edgerly, etc., schedule starts at below 20°, 86 cents, 2-cent spread to 34° and above at $1.16. Schwab posted by Shell Oil Co., Inc. Evangeline, La., posted by Standard Oil Co. of Louisiana.

Hackberry, East and West, effective October 2, 1939, by Stanolind Oil & Gas Co. Below 20 gravity 86 cents, 2 cents added for each degree up to 34° and over at $1.16.

In the Bunkie and Eola pools in Louisiana, effective October 23, 1939, by

Crude Prices by Gravities

	Oklahoma and Kansas	Oklahoma and Kansas	Oklahoma and Kansas	North and Central Texas	Louisiana and Arkansas	East Central Texas	Gray County, Texas	Carson and Hutchinson Counties Texas	West Texas, and Lea County, N. M.	Raccoon, Satsuma, and Tomball, Texas	Gulf Coast	Anahuac, Dickinson, Texas	Refugio, Texas	Mirando-Duval, Beaumont-West Beaumont, Texas	Golden Meadows, Louisiana	Lockport, Iowa, Cameron Meadows, Louisiana	Bunkie and Eola, Louisiana	Artesia, Jackson, Maljamar, N. M.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Below 18																$0.74		
18-18.9									$.53							.76		
19-19.9									.53		$.86	$.81	$.91	$.86		.78		
20-20.9	$.70		$.60						.55		.88	.83	.93	.88		.80		
21-21.9	.72		.63						.57		.90	.85	.95	.90		.82		
22-22.9	.74		.66						.59	$.95	.92	.87	.97	.92		.85		
23-23.9	.76		.69			$.78			.61	.97	.94	.89	.99	.94		.88		
24-24.9	.78		.72	$.71	$.73	.80			.63	.99	.96	.91	1.01	.96	$.90	.91		
Below 25																	$.83	
25-25.9	.80	$.58	.75	.73	.75	.82			.65	1.01	.98	.93	1.03	.98	.90	.94	.85	
26-26.9	.82	.63	.78	.75	.77	.84			.67	1.03	1.00	.95	1.05	1.00	.90	.97	.87	
27-27.9	.84	.68	.81	.77	.79	.86			.69	1.05	1.02	.97	1.07	1.02	.90	.99	.89	
28-28.9	.86	.73	.84	.79	.81	.88	$.72	$.67	.71	1.07	1.04	.99	1.09	1.04	.90	1.01	.91	$.81
29-29.9	.88	.78	.87	.81	.83	.90	.74	.69	.73	1.09	1.06	1.01	1.11	1.06	.90	1.03	.93	.63
30-30.9	.90	.82	.90	.83	.85	.92	.76	.71	.75	1.11	1.08	1.03	1.13	1.08	.90	1.05	.95	.65
31-31.9	.92	.86	.92	.85	.87	.94	.78	.73	.77	1.13	1.10	1.05	1.15	1.10	.92	1.07	.97	.67
32-32.9	.94	.90	.94	.87	.89	.96	.80	.75	.79	1.15	1.12	1.07	1.17	1.12	.94	1.09	.99	.69
33-33.9	.96	.96	.96	.89	.91	.98	.82	.77	.81	1.17	1.14	1.09	1.19	1.14	.96	1.11	1.01	.71
34-34.9	.98	.98	.98	.91	.93	1.00	.84	.79	.83	1.19	1.16	1.11	1.21	1.16	.98	1.13	1.03	.73
35-35.9	1.00	1.00	1.00	.93	.95	1.02	.86	.81	.85	1.21	1.18	1.13	1.23	1.18	1.00	....	1.05	.75
36-36.9	1.02	1.02	1.02	.95	.97	1.04	.88	.83	.87	1.23	1.20	1.15	1.25	1.20	1.02	....	1.07	.77
37-37.9	1.04	1.04	1.04	.97	.99	1.06	.90	.85	.89	1.25	1.22	1.17	1.27	1.22	1.04	....	1.09	.79
38-38.9	1.06	1.06	1.06	.99	1.01	1.08	.92	.87	.91	1.27	1.24	1.19	1.29	1.24	1.06	....	1.11	.81
39-39.9	1.08	1.08	1.08	1.01	1.03	1.10	.94	.89	.93	1.29	1.26	1.21	1.31	1.26	1.08	....	1.13	.83
40 and over	1.10	1.10	1.10	1.03	1.05	1.12	.96	.91	.95	1.31	1.28	1.23	1.33	1.28	1.10	....	1.15	.85

Column 1—Effective October 17, 1938, by Standard Oil Co. of Indiana. By Gulf Refining Co., October 13, 1938. Carter Oil Co. schedule and prices same from 30° upward, but on lower gravities pays below 21° 60 cents, with 3 cents added for each degree up to and including 29-29.9°; effective October 13, 1938. Gulf Oil Corp. starts at below 25° 78 cents, October 13, 1938. Texas Co. schedule starts at 28-28.9° at 86 cents. Pure Oil Co. same as Standard of Indiana's schedule, effective October 14, 1938.

Column 2—Sinclair Prairie Oil Marketing Co. February 16, 1939.

Column 3—Magnolia Petroleum Co. effective October 12, 1938; Shell Petroleum Corp., October 22, 1938; Shell Oil Co., Inc., April 1, 1939.

Column 4—Effective December 3, 1938, by Humble Oil & Refining Co. in Central Texas. By Magnolia Petroleum Co. in East Central and in North and Central Texas, excepting that it starts at below 29° at 79 cents, effective December 3, 1938. Texas Co. in North and Central Texas, same as Magnolia's but effective October 12, 1938. Gulf Refining Co. same as Magnolia's, effective October 13, 1938. Sinclair Prairie Oil Marketing Co. same as Magnolia's, effective October 5, 1939. Stanolind Oil Purchasing Co., in Cooke and Montague counties, schedule starts at below 21°, 60 cents, with a 2-cent spread upward to 40° and over at $1, effective October 17, 1938.

Column 5—Standard Oil Co. of Louisiana, effective October 5, 1938. Met by Gulf Refining Co. October 13; met by Texas Co. October 12.

Column 6—Humble Oil & Refining Co., October 11, 1938.

Column 7—Humble Oil & Refining Co., Effective December 3, 1938. Sinclair Prairie Oil Marketing Co., October 11, 1938. Texas Co. quotes "Panhandle sweet crude," beginning with 34-34.9°, at 84 cents, with 2-cent spread to 40° and over at 96 cents, and "Panhandle sour crude," 79 cents for 34-34.9°, with a top of 91 cents for 40° and over, effective October 12. Magnolia Petroleum Co. met Humble prices throughout, effective December 3. Gulf Refining Co. quotes "Panhandle sweet crude" at below 29°, 72 cents with a 2-cent spread, and a top price of 96 cents for 40° and above, and "Panhandle sour crude" below 29°, 67 cents, with a top of 91 cents for 40° and above effective October 13. Phillips Petroleum Co. schedule for sweet crude in Gray, Carson, and Hutchinson counties, starts at below 29°, 72 cents, with a spread of 2 cents up to 96 cents for 40° and over, effective February 7, 1939.

Column 8—Humble Oil & Refining Co., effective December 3, 1938. Sinclair Prairie Oil Marketing Co., October 11, 1938. Texas Co. quotes "Panhandle sweet crude" at 34-34.9°, 84 cents, with a top of 96 cents for 40 gravity, and "Panhandle sour crude" at 34-34.9°, 79 cents, with a top of 91 cents for 40° and over, effective October 12. Gulf Refining Co. quotes "Panhandle sweet crude" at below 29°, 72 cents, with a top of 96 cents for 40° and over and "Panhandle sour crude" at below 29°, 67 cents, with a top of 91 cents for 40° and above, effective October 13. Phillips Petroleum Co. schedule for sour crude in Carson, Moore, and Hutchinson counties, starts at below 29° at 67 cents, with a spread of 2 cents up to 91 cents for 40° and over, effective February 7, 1939.

Column 9—Humble Oil & Refining Co., effective October 11, 1938. Texas Co. schedule starts at below 26°, 65 cents, and ends at 36° and over at 87 cents, effective October 12. Gulf Refining Co. starts at below 26° at 65 cents and ends at 40° and over at 95 cents, effective October 13. Magnolia Petroleum Co. schedule starts below 25°, 63 cents, and ends at 40° and above at 95 cents, effective October 12. Sinclair Prairie Oil Marketing Co. schedule same as that of Magnolia, effective October 11, but revised on March 24, 1939, to stop at 36° and over at 87 cents. Stanolind Oil Purchasing Co. schedule same as that of Humble, effective October 11. Stanolind Oil & Gas Co. (Winkler County) starts at below 26°, 65 cents, with a 2-cent spread, and a top of 95 cents for 40° and above, effective October 11, 1938. Effective September 1, 1939, Shell Oil Co., Inc., posted Yoakum County crude, starting at below 20°, 53 cents, with 2 cents added for each degree up to 36° and over at 87 cents.

Column 10—Humble Oil & Refining Co., effective October 11, 1938. Magnolia Petroleum Co., in Tomball, effective October 12.

Column 11—Effective October 2, 1939, by Humble Oil & Refining Co. in Texas Coast. By Sinclair Prairie Oil Marketing Co. in Texas Coast, October 3, 1939. By Texas Co. at $1.16 in Texas and Louisiana Coast, October 2, 1939, schedule stopping at 34° and over. By Sun Oil Co. in Texas and Louisiana Coast, October 2, 1939. By Gulf Refining Co. in Louisiana October 2, 1939, excepting that schedule stops at $1.16 for 34° and above. By Gulf Refining Co. in Texas, effective November 1, 1939.

Column 12—Effective by Humble Oil & Refining Co. October 2, 1939. By Sun Oil Co. in Anahuac, October 2, 1939. By Gulf Refining Co. in Anahuac, October 2, 1939. On November 1, 1939, Gulf Refining Co. applied these prices to Anahuac, Hull (new), Pierce Junction, Orange, Thompson (deep).

Column 13—Effective October 2, 1939, by Humble Oil Refining Co. and Continental Oil Co. By Texas Co. up to 28° and over at $1.09 October 2, 1939. Atlantic adopted Humble price schedule November 7, 1938, in Refugio and applied it also to Greta.

Column 14—Effective October 2 by Humble Oil & Refining Co. By Sun Oil Co. in Mirando alone, stopping at 24-24.9° at 96 cents. By Stanolind Oil & Gas Co. in West Beaumont, alone, October 2, 1939. Gulf Refining Co. in West Beaumont, October 2, 1939. By Magnolia Petroleum Co. in Beaumont, October 2, 1939. By Texas Co. in Duval and Mirando, stopping at 28-28.9° at $1.09. Continental Oil Co. in Mirando and Duval, October 2, 1939.

Column 15—Effective October 2, 1939, by Texas Co.

Column 16—Magnolia Petroleum Co., effective October 12, 1938.

Column 17—Standard Oil Co. of Louisiana, effective October 23, 1939.

Column 18—Continental Oil Co., effective October 11, 1938.

Standard Oil Co. of Louisiana, below 25° 83 cents, 2 cents added for each degree up to 40° and over at $1.15.

Iowa, La., effective October 11, 1938, by Shell Petroleum Corp. and on April 1, 1939, by Shell Oil Co., Inc.: Below 18°, 75 cents; 18-18.9, 77 cents; 2-cent to 21-21.9 at 83 cents; then a 3-cent spread to 26-26.9 at 98 cents; then a 2-cent spread to 34° and above at $1.14.

Middle Western States

OHIO OIL CO.
(Effective June 8, 1939)

Illinois old fields	$0.95
Illinois basin	1.05
Princeton, Ind.	.95
Western Kentucky (June 9, 1939)†	.90
Birk City, Ky. (June 9, 1939)¶	.90
Corydon, Ky. (June 9, 1939)¶	.90
Greendale, Porter, Crystal and Wise, Mich. (Oct. 9, 1939)*‡	$1.02
Buckeye, Bentley, Edenville, Beaverton, Mich. (Oct. 9, 1939)*	1.00
Freeman-Redding, Mich. (Oct. 9, 1939)‡	.97
Arenac, Mich. (Oct. 9, 1939)*	.82
West Branch, Mich. (Nov. 1, 1939)*	.85
Allegan-Kent (Oct. 10, 1939)	1.03
Bloomingdale and Columba, Mich.¶	1.03
Muskegon	1.00
Sherman and Freeman, Mich. (Oct. 9, 1939)‡	.97
Eastern Kentucky:	
Big Sandy River (June 9, 1939)†	$1.02
Kentucky River (June 9, 1939)†	1.10

*Simrall Corp. †Ashland Refining Co ‡Pure Transportation Co.. §Imperial Refining Co. ¶Sohio Oil Co. Bloomingdale posted by Tri-Lakes Corp. Kent County by Naph-Sol Refining Co. Effective Sept. 13, 1939, Sohio Corp. posted 95 cents per barrel in Salem, Ill., pool, and on Oct. 10, 1939, posted 95 cents per barrel in the Griffin field in Gibson County, Indiana, and Wabash County, Illinois, for crude produced from sand and 90 cents for crude produced from limestone.

Rocky Mountain States

Dry Creek, Wyo. (Oct. 11, 1938)*	$0.92
Elk Basin, Wyo. (Oct. 11, 1938)*†	.90
Grass Creek, light, Wyo. (Oct. 11, 1938)*†	.90
Grass Creek, heavy (Oct. 11, 1938)†	.40
Lance Creek, Wyo. (Oct. 11, 1938)*	.77
Rock Creek, Wyo. (Oct. 11, 1938)*	1.00
Iles, light, Colo. (Oct. 11, 1938)†	.98
Iles, heavy, Colo. (Oct. 11, 1938)†	.92
Dutton Creek, Wyo. (Oct. 11, 1938)†	See note below
Frannie, light, Wyo. (Oct. 11, 1938)†	$0.55
Frannie, heavy, Wyo. (Oct. 11, 1938)†	.42
Hamilton dome, Wyo. (Oct. 11, 1938)†	.35
Midway, Wyo. (Oct. 11, 1938)†	See note below
Salt Creek Tensleep Crude, Wyo. (Oct. 11, 1938)†	$0.646
Salt Creek (Oct. 11, 1938)	See note below
Canon City, Colo. (Oct. 11, 1938)‡	$0.90
Florence, Colo. (Oct. 11, 1938)‡	.90
Cat Creek, Mont. (Oct. 11, 1938)‡	1.10
Big Muddy, Wyo. (Oct. 11, 1938)‡	.98
Lance Creek, Wyo. (Oct. 11, 1938)‡	.77
Lea County, New Mexico	See West Texas gravity schedule†
Artesia, Jackson and Maljamar	See gravity table†
Fort Collins and Wellington, Colo.	See note below
Eddy County, New Mexico (Oct. 11, 1938)§	$0.77

*Ohio Oil Co. †Stanolind Oil & Gas Co. ‡Continental Oil Co. §Sinclair Prairie Oil Marketing Co.

Dutton Creek and Salt Creek Tensleep crudes start at below 29°, 86 cents, 2 cents spread up to 40° and over at $1.10. Salt Creek crude, excepting Tensleep, takes Standard Oil Co. of Indiana's Oklahoma-Kansas prices. Stanolind Oil & Gas Co., effective Oct. 11, discontinued posting prices in Greybull-Torchlight, Wyoming, and Hogback and Hospah, New Mexico, in Fort Collins and Wellington, Colorado, effective Oct. 11, 1938, by Continental Oil Co. 28-28.9°, 81 cents, with 2 cents added for each degree up to 40° and over at $1.05.

Eastern States

SOUTH PENN OIL CO.
(Effective Dec. 1, 1939)

Pennsylvania Grade oil in National Transit lines (Bradford field)	$2.50
Pennsylvania Grade oil in Southwest Pennsylvania lines	2.15
Pennsylvania Grade oil in Eureka Pipe Line lines	2.09
Corning grade oil in Buckeye Pipe Line Co. line (Nov. 4, 1939)	1.12

TIDE WATER ASSOCIATED OIL CO. and NEW YORK TRANSIT CO.
(Effective Dec. 1, 1939)

Bradford, Pa.	$2.50
Allegany, N. Y.	2.50

PENNZOIL CO.
(Effective Dec. 1, 1939)

Group A	$2.45
Group B	2.44
Group C	2.43
Group D	2.42
Group E	2.40

PURE OIL CO.
(Effective Dec. 1, 1939)

West Virginia	$2.09

Canada

ONTARIO
(Nov. 6, 1939, by Imperial Oil., Ltd.)

Petrolia	$2.10
Oil Springs	2.07
Both well	2.10

TURNER VALLEY
(Jan. 5, 1938, by Imperial Oil, Ltd.)

Clear naphtha and discolered naphtha, 65° and higher	$2.14
Discolored naphtha and crude oil, 40°-40.9°	1.14
Increasing 2 cents for each degree gravity with top price for 64°-64.9°	1.62

These prices f.o.b. producers' field tankage

Crude-Oil Price Changes

South Penn Oil Co., Tide Water Associated Oil Co. and other crude-oil purchasers in the Pennsylvania Grade fields of New York, Pennsylvania, West Virginia and Ohio on December 1 raised posted prices 10 cents per barrel.

Tank-Wagon Changes

(Continued from Page 102)

field, Worcester, Hartford, New Haven, and Providence. Same date, advanced dealer tank-wagon gasoline 0.3 cent in New York.

Continental Oil Co., October 26, advanced tank-wagon dealer gasoline 0.5 cent in Muskogee and on October 31 an additional 0.5 cent; October 30 advanced tank-wagon and dealer gasoline 0.5 cent in Roswell; November 9, reduced tank-wagon and dealer gasoline 2 cents in Salt Lake City and November 25 an additional 2 cents.

Mississippi Wildcats

(Continued from Page 97)

Wilkinson County

Louisiana Progress Oil Co.'s No. 1 A. M. Young, 792 ft. N, 88° 30' W SE cor., Sec. 40-4n-1e. Set 10¾-in. csg. 1,200 ft.; T. Vicksburg 3,190 ft.; T. Wlx. 5,201 ft.; cg. 5,240 ft.

Yazoo County

Conroe-Wilcox's No. 1 Stubblefield, Sec. 25-12-1w. Set 10¾-in. csg. 1,373 ft.; drlg. ahead.

Harry Hanbury et al's No. 1 Brooks, SW Sec. 17-10-2. Loc.

Edgar Johnson et al's No. 1 Broomfield, SE SE Sec. 2-10-3. Partly R.U. and S.D.

Jones & O'Brien Bros.' No. 1-B Stevens, C SW SW Sec. 12-10-3. Cg. sh. 4,665 ft.

Plains Prod. Co.'s No. 1 Milner, 546 ft. N, 660 ft. E, SW cor. SW SW Sec. 7-10-2. Drk.

T. B. Slick's No. 1 W. S. Atkinson, 629 ft. S,. 556 ft. E, NW cor. NW NE SW Sec. 3-10n-3w. Drlg. bl. sh. 3,920 ft.

Union Prod. Co.'s No. 2 J. Stevens, C NW NE Sec. 13-10-3. Drk.

Union Prod. Co.'s No. 2 G. C. Woodruff, 3,220.5 ft. S, 680.7 ft. E, NW cor. SE Sec. 13-10-3. (Cor.) T.D. 4,578 ft.; T. chalk 4,435 ft.; T. oil sd. 4,535 ft.; set 7-in. csg. 4,529 ft.; W.O.C.

Union Producing Co.'s No. 3 Woodruff, Sec. 18-10n-2w. Spudded.

Union Prod. Co.'s No. 4 Woodruff, C NW SE Sec. 13-10-3. R.U.

Yazoo Refinery, Inc.'s No. 1 Frank Brooks, W½ SE NW Sec. 17-10-2w. Set 16-in. csg. 118 ft.; S.D.

FLORIDA

Levy County

Harkey & Houck's No. 1 Crapps, Sec. 15-14s-17e. Drlg. 910 ft. No report.

Nassau County

St. Mary's River Oil Corp.'s No. 1 Hillard Turpentine Co., NW cor. NW SE Sec. 19-4n-24e. S.D. 4,755 ft. (cor.); set 6⅝-in. csg. 4,645 ft.

Suwannee County

J. W. Phillips Oil Expltn. Co.'s No. 1 Shilkett, NW NW Sec. 14-4s-14e. S.D. cor. T.D. 369 ft.

GEORGIA

Clinch County

Georgia Resources, Inc.'s No. 1 Gillican, Dist. 4. T.D. sh. 325 ft. (cor.); trying to lower csg. 250 ft.

Montgomery County

E. O. Moses' No. 3 Montgomery, SW R.R. station, Uvalda Sur. Drlg. sh. 750 ft. No report.

ARIZONA

Apache County

Franco-Arizona Oil Co.'s No. 1 Government, SE NE Sec. 14-14n-26e. Granite 2,595 ft., T.D.; D.&A.

Maricopa County

Sam F. Reaves' No. 1 King, SW SE Sec. 33-1n-4w. Spd.

Peoples O. & G. Co. No. 1 Gardner, SE¼ Sec. 2-1n-3e. Drlg. below 500 ft.

Yavapai County

Ari-Copa Drlg. & Mining Co. No. 1 Puntenney, SW¼ Sec. 27-18n-2w. S.D. 460 ft.

Chino Valley Oil Dev. Co. No. 1 State, Sec. 20-18n-2w. Drlg. 1,130 ft.

Yuma County

Shows of oil between 480 and 1,640 ft.; drlg. below 2,804 ft.

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

(All gravities above those quoted take highest price offered in that field)

Gravity—	Signal-Hill (Long Beach)	Alamitos Heights	Seal Beach	Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Greeley Canal	Mountain View	Elk Hills, Buena Vista, Midway-Sunset, Lakeview	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills
14-14.9	$.80	$.74	$.79	$.78	$.79	$.80	$.76	...	...	...	$.80	$.76	$.76	$.77	$.78	...	...	...	$.70	$.70	$.70	...	...
15-15.9	.80	.74	.79	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	...	.70	.70	.70	...	...
16-16.9	.80	.74	.79	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	...	.70	.70	.70	...	...
17-17.9	.80	.74	.79	.78	.81	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	...	.70	.70	.70	...	...
18-18.9	.80	.74	.79	.78	.84	.80	.78	...	...	...	.82	.76	.76	.77	.78	...	...	...	.70	.70	.70	...	...
19-19.9	.82	.74	.79	.82	.87	.84	.81	...	...	...	.85	.76	.78	.77	.78	...	...	$.70	.74	.74	.71	$.70	...
20-20.9	.85	.74	.79	.85	.90	.88	.84	...	...	...	.88	.78	.82	.77	.80	...	...	.70	.78	.78	.72	.70	...
21-21.9	.88	.74	.79	.89	.93	.93	.88	...	...	...	.91	.80	.85	.77	.84	.78	...	.73	.82	.82	.74	.70	...
22-22.9	.92	.74	.82	.92	.96	.98	.92	...	...	...	.93	.84	.89	.79	.88	.78	...	.77	.87	.86	.78	.72	...
23-23.9	.95	.77	.86	.96	.99	1.02	.96	$.84	$.79	...	.96	.88	.93	.82	.92	.78	...	.80	.92	.90	.82	.76	...
24-24.9	.99	.80	.91	1.00	1.02	1.06	.99	.88	.81	...	.99	.91	.96	.85	.96	.82	...	.84	.97	.94	.86	.79	...
25-25.9	1.03	.82	.95	1.03	1.05	1.11	1.03	.93	.83	...	1.02	.95	...	.89	.99	.86	...	.88	1.01	.98	.90	.83	...
26-26.9	1.06	.85	1.00	1.07	1.09	1.16	1.06	.98	.86	...	1.05	.98	...	.93	1.03	.90	...	.91	1.06	1.02	...	...	...
27-27.9	1.10	.88	1.05	1.11	1.12	...	1.10	1.03	.88	...	...	1.02	...	.97	1.06	.95	$.91	.95	1.10	1.06	...	...	...
28-28.9	1.14	.90	1.10	1.14	1.15	F.O.B.	1.14	1.07	.90	...	...	1.06	...	1.01	1.10	.99	.94	.99	1.15	1.10	...	...	...
29-29.9	1.17	.93	1.15	1.18	1.18	our	1.17	1.12	.93	...	...	1.09	...	1.06	1.14	1.03	.98	1.02	1.20	1.14	...	...	...
30-30.9	1.21	.95	1.19	1.22	1.21	pipe	1.21	1.17	.95	F.O.B.	...	...	...	1.10	1.17	1.08	1.02	1.06	1.25	1.18	...	...	...
31-31.9	...	...	...	...	1.24	line	1.24	1.22	.97	ship	...	...	...	1.14	1.21	1.12	1.06	1.09	1.29	...	...	...	...
32-32.9	...	...	...	...	1.27	...	1.27	1.27	1.00	...	...	...	...	1.18	1.25	1.16	1.09	1.13	1.34	...	...	...	...
33-33.9	...	...	...	...	...	...	...	1.32	...	$1.28	...	...	...	1.22	1.28	1.20	1.13	1.17	1.38	...	...	...	$1.19
34-34.9	...	...	...	...	...	...	...	1.37	...	1.32	...	...	...	1.26	1.32	1.25	1.17	1.20	...	...	...	...	1.23
35-35.9	...	...	...	...	...	...	...	1.42	...	1.35	...	...	...	1.30	...	1.29	1.20	...	...	...	...	...	1.27
36-36.9	...	...	...	...	...	...	...	1.46	...	1.39	...	...	...	1.34	...	1.33	1.24	...	...	...	...	...	1.31
37-37.9	...	...	...	...	...	...	...	1.51	...	1.43	...	...	...	1.38	...	1.37	1.28	...	...	...	...	...	1.35
38-38.9	...	...	...	...	...	...	...	1.56	...	...	...	...	...	1.42	...	1.42	1.31	...	...	...	...	...	1.39
39-39.9	...	...	...	...	...	...	...	1.61	...	...	...	...	...	1.47	...	...	1.35	...	...	...	...	...	1.43
40-40.9	...	...	...	...	...	...	...	1.66	...	...	...	...	...	1.51	...	...	1.39	...	...	...	...	...	...
41-41.9	...	...	...	...	...	...	...	...	...	...	...	...	...	1.55	...	...	1.43	...	...	...	...	...	...
42-42.9	...	...	...	...	...	...	...	...	...	...	...	...	...	1.59	...	...	1.46	...	...	...	...	...	...
43-43.9	...	...	...	...	...	...	...	...	...	...	...	...	...	1.63	...	...	1.50	...	...	...	...	...	...
44-44.9	...	...	...	...	...	...	...	...	...	...	...	...	...	1.67	...	...	1.54	...	...	...	...	...	...
45-45.9	...	...	...	...	...	...	...	...	...	...	...	...	...	1.71	...	...	1.57	...	...	...	...	...	...
46-46.9	...	...	...	...	...	...	...	...	...	...	...	...	...	1.75	...	...	1.61	...	...	...	...	...	...
47-47.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.65	...	...	...	...	...	...
48-48.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.68	...	...	...	...	...	...

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28° and over, and Belridge and Lost Hills schedule stops at $1.32 for 37° and over. By Standard Oil Co., effective October 15; El Segundo, 14 to 18.9°, 80 cents; 19-19.9, 82 cents; 20-20.9, 85 cents; 21-21.9, 88 cents; 22-22.9, 92 cents; 23-23.9, 95 cents; 24-24.9, 99 cents; 25-25.9, $1.03; 26-26.9, $1.05; 27-27.9, $1.10; 28-28.9, $1.14; 29-29.9, $1.17; 30-30.9, $1.21. Wilmington, 14 to 16.9, 75 cents; 17-17.9, 77 cents; 18-18.9, 79 cents; from 19° upward, prices same as Signal Hill.

By Union Oil Co., Santa Paula, effective June 22, 1936: 21° and below, 70 cents; 22°, 72 cents; 23°, 76 cents; 24°, 79 cents; 25°, 88 cents. Orcutt, effective June 22, 1936: 17° and below, 70 cents; 18°, 72 cents; 19°, 74 cents; 20°, 77 cents; 21°, 80 cents; 22°, 83 cents; 23°, 86 cents; 24°, 88 cents; 25°, 91 cents; 26° and upward, 93 cents.

Effective October 1, 1939, Standard Oil Co. of California began posting prices in Coles Levee and Richfield Western fields as follows: 27°, $1.00; 28°, $1.03; 29°, $1.06; 30°, $1.09; 31°, $1.13; 32°, $1.16; 33°, $1.19; 34°, $1.22; 35°, $1.26; 36°, $1.29; 37°, $1.32; 38°, $1.35; 39°, $1.39; 40°, $1.42; 41°, $1.45; 42°, $1.48; 43°, $1.51; 44°, $1.55; 45°, $1.58; 46° and over, $1.61.

Market Record of Active Oil Stocks

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1939 High	1939 Low	Week ended Dec. 2 High	Week ended Dec. 2 Low	Week ended Dec. 2 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
74½	50	58	57	57¼	Amerada Corp.	788,675	N.P.	50cQ	10-31-39	$2.00	$2.07	$3.04	78	55	111⅞	51½
24⅞	18⅛	22½	21⅛	21⅛	Atlantic Refining	2,663,999	$25	25cQ	12-15-39	1.00	1.40	3.51	27⅝	17⅜	37	18
21½	10¼	16	15	15	Barber Asphalt Co.	390,223	$10	25c	11-17-39	....	—.85	1.91	23⅜	12⅛	43⅜	10¼
19½	11⅜	12⅜	12¼	12½	Barnsdall Oil Co.	2,250,344	$5	15c	12-9-39	1.00	1.26	.85	21⅜	10⅜	35¼	10
9⅞	6½	7¾	7⅛	7⅛	Consolidated Oil Corp.	13,751,846	N.P.	20cQ	11-15-39	.80	.55	1.43	10⅜	7	17⅜	7
31½	19⅞	24⅞	22¼	23½	Continental Oil of Delaware	4,682,581	$5	25cQ	12-26-39	‖1.00	1.10	2.98	35¾	21¼	49	24
9⅜	4½	6¼	5⅝	5⅞	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	.83	.94	9⅜	5	17⅝	4¾
20¼	10	13¼	12⅞	13	Lion Oil Refining	435,815	N.P.	25cQ	10-10-39	1.00	2.09	2.17	25⅛	15⅝	34	12½
18	11⅛	15¼	14¼	14⅝	Mid-Continent Petroleum	1,857,912	$10	35c	12-1-39	.60	.56	2.86	22⅝	12¼	35⅜	14
14⅞	8⅜	10	8¾	9½	Mission Corporation	1,379,245	$10	40c	12-15-39	1.00	1.04	1.31	17¾	10⅝	34	15
15½	5⅝	9⅞	8⅜	8⅜	National Supply	1,155,517	$10	....	12-22-37	....	—.79	4.90	23	12½	41⅜	17⅝
10½	6	7½	6½	6½	Ohio Oil Co.	6,563,377	N.P.	20c	12-15-38	.20	.25	1.30	14⅞	8⅜	22⅞	8
11⅞	7⅜	8¼	7⅝	7⅝	Pacific Western Oil	1,000,000	N.P.	40c	12-19-39	.50	1.22	1.39	15⅞	10⅛	29⅜	11¾
8⅜	5	7	7	7	Pan American Pet. & Trans.	4,702,945	$5	....	12-21-37	....	.08	1.18	9¼	6¼	17⅛	7
46½	31¼	41	39¼	39¾	Phillips Petroleum	4,449,052	N.P.	50cQ	12-1-39	‖2.00	2.03	5.42	44⅜	27¼	64	30½
24	17⅛	21½	20½	20⅝	Plymouth Oil Co.	1,006,200	$5	35cQ‡	12-31-39	1.40	2.59	2.85	25⅜	15	29⅞	13
11¾	6⅛	9	8⅛	8½	Pure Oil Co.	3,982,031	N.P.	25c	12-20-39	....	.38	2.15	13½	8¼	24⅜	8¾
10¼	6⅝	9	8⅝	8⅝	Richfield Oil Corp.	4,010,000	N.P.	50c	12-21-38	.50	.51	.35	9⅞	5	6½	4½
24⅝	15½	19½	18⅝	19	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	12-15-39	1.00	1.52	1.97	27½	15½	54⅛	16
17¼	9⅞	13½	12½	12⅝	Shell Union Oil	13,070,625	N.P.	25c	12-20-39	.70	.72	1.44	18⅜	10	34⅜	14⅞
29½	15½	20½	19	19½	Skelly Oil	995,349	$15	25c	12-22-39	1.00	2.27	6.07	34⅜	18½	60⅝	26½
15⅛	10¼	12⅞	12⅛	12¼	Socony-Vacuum	31,206,071	$15	25cSA	9-15-39	.50	1.29	1.82	16⅜	10⅜	23¼	13
33⅝	24¼	25⅜	25⅛	25¼	Standard Oil of California	13,004,153	N.P.	25cQ	12-15-39	1.40	2.22	3.17	34⅞	25⅛	50	27⅛
30	22⅜	26¼	25⅝	26	Standard Oil (Indiana)	15,272,020	$25	50c†	12-15-39	1.00	1.82	3.66	35½	24⅜	50	26½
53½	38	45⅝	44¼	44⅝	Standard Oil of New Jersey	26,618,065	$25	75c¶	12-15-39	$1.50	2.86	5.64	58⅜	39⅜	76	42
66	45⅜	60	58	58	Sun Oil	2,316,484	N.P.	25cQ	12-15-39	1.00	1.07	3.86	65⅛	45	77½	44½
3⅝	1⅜	2¼	2⅛	2¼	Superior Oil Corp.	1,388,979	$1	10c	12-28-38	.10	.24	.32	4¼	1⅜	7⅜	1½
50⅜	32½	46⅜	44⅛	44⅜	Texas Corp.	10,876,882	$25	50cQ	1-2-40	2.00	2.13	5.02	49⅝	32⅝	65⅛	34⅜
5⅜	3¼	4	3⅞	4	Texas Gulf Producing Co.	888,144	N.P.	10c	12-15-39	.15	.86	.68	5⅞	2⅝	9⅝	2
11⅜	7	8⅞	8⅝	8½	Texas Pacific Coal & Oil	888,236	$10	10c	12-1-39	.40	1.16	1.11	12½	7	16⅝	5⅝
14¼	9½	10⅜	10	10½	Tide Water Associated	6,375,253	$10	15c	12-1-39	1.00	1.28	2.08	15⅜	10⅛	21⅝	13⅛
19⅜	15⅛	16⅜	16⅝	16⅝	Union Oil of California	4,666,270	$25	25c	11-10-39	1.20	1.47	2.58	22½	17⅛	28⅛	17½
24¼	20⅛	23	22½	22⅝	Union Tank Car Co.	1,177,381	N.P.	40c†	12-1-39	1.30	1.16	1.70	23½	20	31½	22
4¼	2⅝	3⅝	3¼	3¼	Wilcox Oil & Gas	487,568	$5	....	5-10-28	....	.52	.24	3½	1⅝	6¼	1⅜

†Includes extras. ‡Also 2 per cent in stock. §Also 1½ per cent stock dividend. ‖Also right to subscribe to bonds. ¶Also 1½ per cent in stock. —Deficit.

New York Curb Exchange

1939 High	1939 Low	Week ended Dec. 2 High	Week ended Dec. 2 Low	Week ended Dec. 2 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
11¾	5½	6⅝	6	6	American Republics Corp.	1,308,049	$10	10c	7-11-38	$0.10	—$0.22	$0.27	11¾	5	10	6⅝
7¼	2½	3	2⅞	2⅞	Bridgeport Machine Co.	270,000	N.P.	$1.25	12-30-37	....	—.14	1.90	10¼	4⅞	21⅝	7
34¾	26½	28½	28½	28½	Buckeye Pipe Line Co.	200,000	$50	$1	12-15-39	2.00	2.36	4.02	39	22½	51½	36
130	110	118¾	117¾	117¾	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	12-18-39	6.50	5.32	6.73	128	97	112	95½
9¼	4¼	4⅞	4¼	4⅝	Cities Service (new)	3,704,067	$10	....	6-1-32	....	.23	1.02	11	5⅛	5⅝	1½
2¼	½	1⅝	1½	1½	Cosden Petroleum	462,551	$1	....	.....	....	....	.19	2⅜	⅜	5⅛	1½
28	16⅜	23¼	22⅜	23	Creole Petroleum	6,975,383	$5	50cSA†	12-15-39	1.00	1.64	1.61	27½	17½	38⅜	20¼
7⅛	3⅝	4⅜	4¼	4¼	Darby Petroleum	351,390	$5	25cSA	1-15-39	.50	....	1.36	10¼	5½	18⅝	6½
2⅝	1½	2¼	2	2	Derby Oil & Refining	263,162	N.P.	....	.....	....	—.91	1.34	3½	1½	8⅝	2¼
22¼	15⅛	22¼	22¼	22¼	Eureka Pipe Line	50,000	$50	50c	11-1-39	3.00	—.37	—.12	31	16	47½	24½
45⅛	29¼	39⅞	38⅞	39¼	Gulf Oil Corp.	9,076,202	$25	25cQ	12-15-39	1.00	1.43	3.51	46⅞	33	63½	33
71	52½	65⅜	65	65½	Humble Oil & Refining	8,987,840	N.P.	62½c	12-16-39	3.00	3.98	5.22	72⅝	56	87	54⅞
17	11⅜	13⅛	12⅛	12⅛	Imperial Oil of Canada	26,965,078	N.P.	37½c†	12-1-39	1.25	.96	.98	19½	14⅛	24¼	14½
7	5½	5⅝	5⅝	5⅝	Indiana Pipe Line	300,000	$10	20c	11-15-39	.50	.47	1.03	9⅜	6	15	5⅞
27½	17½	20¼	17½	18	International Petroleum	14,324,088	N.P.	75c	12-1-39	2.50	1.98	....	31¼	21	39½	23½
3¾	2⅛	2¼	2⅛	2¼	Kirby Petroleum Co.	500,000	$1	10c	4-15-38	.10	.14	.17	5	2⅛	8⅜	2⅝
10½	7⅛	9¾	9¼	9¼	Lone Star Gas	5,553,747	N.P.	30c	12-22-39	.80	.88	1.14	10⅜	6⅝	14¼	5¼
7¾	4	6¼	5⅛	5¾	Louisiana Land & Exp.	2,977,449	$1	5c	12-15-39	.45	.45	.58	9⅜	6½	15¼	6⅜
17	14½	..	..	..	Margay Oil Corp.	149,943	N.P.	25cQ	1-10-40	1.00	2.28	3.26	24	16	33½	17
8¾	6⅝	7⅝	7⅝	7⅝	Midwest Oil Co.	998,474	$10	45c	12-15-39	1.00	.93	1.14	9¾	6⅝	14⅝	6¼
6	4⅞	5¾	5⅛	5¼	Mountain Producers	1,593,584	$10	30cSA	12-15-39	.60	.62	.76	5¾	4⅛	7⅜	4⅛
14	11¼	12⅞	12⅜	12¾	National Fuel Gas	3,810,183	N.P.	25cQ	10-16-39	1.00	.84	.96	14⅝	11½	19½	12
9¼	7¼	8⅞	8⅜	8½	National Transit	509,000	$12.50	50c	12-15-39	.75	.88	1.19	9¼	6½	12½	7¼
1⅜	1¼	1¼	1¼	1¼	New Mexico and Arizona	1,000,000	$1	1c	12-1-37	....	.02	.02	2⅜	1⅛	5	1⅛
5	4	..	..	..	New York Transit	100,000	$5	25c	10-14-39	.25	.16	.49	4½	3½	5⅜	3⅛
6	4½	5½	5	5½	Northern Pipe Line	120,000	$10	15c	12-1-39	.35	.24	.78	6	4	12⅜	5⅜
7⅝	4	5⅝	5	5⅛	Pantepec Oil	2,857,000	$1	....	.....	....	....	....	7⅜	3½	9⅝	2⅜
5	1¼	3½	3¼	3¼	Root Petroleum Co.	336,045	$1	25c	2-1-37	....	.17	—.17	4½	1⅝	12⅜	2
3	1⅞	2⅛	2⅛	2⅛	Ryan Consolidated	298,931	N.P.	....	.....	....	.29	.46	4	2⅛	6½	2¼
4⅞	3½	4⅝	4⅜	4⅜	Southern Pipe Line	100,000	$10	15cSA	9-1-39	.30	—.27	.85	5⅜	3¼	7¼	3⅞
40½	26⅝	40	37⅛	37⅛	South Penn Oil	1,000,000	$25	$1.87½Q†	12-15-39	1.75	1.44	4.64	39	28⅝	56	35
23	17	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	50cQ	10-2-39	2.00	—.41	.95	22¼	16½	42	20
19½	17¼	19	18¼	18¼	Standard Oil of Kentucky	2,604,790	$10	55c†	12-15-39	1.25	1.45	1.60	18⅜	15	21⅛	14⅜
27⅝	17	27	25	25⅝	Standard Oil of Ohio	753,740	$25	75c†	12-15-39	1.00	1.81	3.67	22⅜	16¼	45	16
2⅝	1⅜	2	1⅜	2	Sunray Oil	2,007,076	$1	5c	12-20-39	.05	.23	.42	3¼	2	4⅞	2
4	2⅝	3	2⅝	2⅝	Texon Oil & Land	936,024	$2	10c	6-30-39	.60	.58	.51	5¼	3½	7⅝	2
6	2½	2⅞	2⅝	2⅞	Transwestern Oil Co.	750,000	$10	....	.....	....	—.12	.48	7⅝	4¼	13⅞	4⅝
3⅝	1⅝	2⅛	1⅞	1⅞	United Gas Corp.	7,818,959	$1	....	.....	....	—.51	.25	5¼	2⅝	13⅞	3

†Includes extras. ‡Payable in Canadian funds. —Deficit.

New or Improved Equipment

Wide Range of Cutting Work Is Done by Airco Planograph

The versatility of the new Airco No. 10 planograph, announced by Air Reduction Sales Co., 60 East Forty-second Street, New York, is demonstrated by its ability

to gas-cut straight lines, rectangles, circles and irregular shapes from ferrous metal of any thickness within the present practical limits of the cutting torch. Although a stationary-type machine, the new unit can readily be moved by crane to different points in the shop.

The carriage travels upon a tracing table. The torches and tracing devices are supported on the carriage. Operating on either 100 or 220 volts a.c. or d.c., the unit requires a minimum of floor space. Even including the work table, the new planograph requires a working area of only 5½ by 10½ ft.

The cutting range in single-torch operation is 24 in. wide by 72 in. long. This length can be increased indefinitely in multiples of 72 in. by utilizing additional tracing tables. The maximum diameter of circle cuts is 24 in. When two torches, mounted on the regular operating bar, are employed for simultaneous cutting, the cutting area for each torch is 12 in. wide by 72 in. long. Two circles each up to 12 in. diameter can also be cut with the torches mounted in this manner. By using an auxiliary bar, the cutting area of each is 24 by 24 in.

The tracing device for manual tracing can be locked so that, without manual guiding, it will travel in a straight line in any desired direction.

Sees Rubber Needs Supplied

Arriving from England to assume his new post as president of B. F. Goodrich Co., John Lyon Collyer said that without doubt the International Rubber Regulations Committee would release adequate quantities of rubber to meet both British and American needs and that he expected little trouble in keeping the shipping lanes open for transportation of this commodity. As an American citizen he felt this country should concentrate on a united effort to rebuild its military and economic strength so that its ability to act independently in meeting the contingencies of present world conditions would be unquestioned. Mr. Collyer since 1937 has been joint managing director of Dunlop Rubber Co., Ltd.

Tobin Book Tells of Oil Mapping

Edgar Tobin Aerial Surveys, San Antonio, Tex., has brought out a book, "Maps for the Oil Industry," which goes into detail concerning activities of this firm in the production of aerial maps and their position in oil production. The volume consists of 46 pages of text, with illustrations showing how each phase of the work is carried out, and concluding with eight actual samples of the various types of maps produced. The covers carry reproductions of areas photographed.

A double-page spread shows a section of the reproduction department, a scene in the engineering and mosaic department, and a view of the motor and camera repair shop, supported by pictures of the administration building, the operations plant, and a panoramic view of the more than 300 employes.

Specializing in making mosaic maps adapted to the particular requirements of exploration, production, and transportation of the oil industry, has resulted in this industry spending more than $3,000,000 with this firm during the past 11 years. Two maps developed by this company which have proven highly important to the exploration divisions of the oil business are: (1) Regional base maps, for permanent recording and correlation of exploration data, and (2) land ownership maps, for definite and accurate data concerning land ownerships, titles, abstracts, deficiencies and boundaries.

No Derrick Is Needed to Install Merla Insert Pump Archor

The Merla insert pump anchor, made by Merla Tool Corp., Dallas, Tex., is designed to save money and time when a well is put on the pump. It is not necessary to pull tubing when installing the pump, so no derrick is required, a gin pole being sufficient to run the rods with the pump and anchor attached.

With this new insert pump anchor the pump can be set at any depth and reset as desired without being removed from the tubing. The economy of using the new insert pump anchor lies in the fact that the devise eliminates a tubing job.

The fluid area through the improved anchor is twice that of the previous model. The packing sleeve has been shortened and new controlled expansion features are added. New and heavier hook wall assembly, with improved friction springs, makes this anchor easier to set and reset. The slotted cone, with knurling inside and on the tube, gives this anchor the Merla patented hold-down feature while pumping. The pump adapter can be furnished to fit any standard insert pump.

Wide Range of Chassis Offered In Ford V-8 Line of Trucks

Designed to meet the major requirements of the expanding special body field, 19 chassis types are included in the 1940 line of Ford V-8 trucks and commercial cars. They range in wheelbase from 101 in. to 194 in. and comprise the largest selection for special body installations ever offered by the company. All truck chassis provide standard cab-to-axle measurements and frame widths for mounting standardized bodies built by independent body manufacturers.

New in the line are the regular and cab-over-engine chassis of 158-in. wheelbases. The former provides a cab-to-axle dimension of 84 in. and the latter a cab-to-axle dimension of 117 in. Three chassis types, chassis with cowl, chassis with windshield, and chassis with cab, are available in 134-in. and 158-in. regular wheelbases, 122-in. 1-ton and 122-in. ¾-ton wheelbase, and 112-in. commercial car chassis.

Haering Appointed Distributor

D. W. Haering & Co., Inc., 2308 South Winchester Avenue, Chicago, is introducing the new Nelson chemical proportioning pump for which it has been appointed national distributor. This pump, utilizing "synchronized" drive, is applicable to the introduction of water treatments, oil treatments, etc., and may be applied to continuous sampling wherever reciprocating control is available. The Nelson pump is described in a folder obtainable from D. W. Haering & Co., Inc.

Bearing Wear Is Taken Up by Peeling Off Layer of Shim

The importance of rapid and easy field adjustments of all moving parts is a requisite of oil-field equipment not overlooked by Gardner-Denver Co. Bearing wear

in that company's water-cooled air compressors and oil-field pumps is quickly taken up by peeling a layer from the laminated shims manufactured by Laminated Shim Co., 21-24 Forty-fourth Avenue, Long Island City, N. Y. These laminated shims are a regular feature of this equipment.

Lane-Wells Employes Insured

A new group-insurance plan affording wide benefits against sickness, disability, accident and death, has been put into effect for all employes of Lane-Wells Co. who have completed 3 months or more of service, according to an announcement made by Rodney S. Durkee, president. The company pays a substantial portion of the cost of the insurance, which is underwritten by Travelers Insurance Co. In addition, employes can buy more insurance up to certain amounts based on the period of employment and monthly earnings.

Hunt Gets License From Oweco

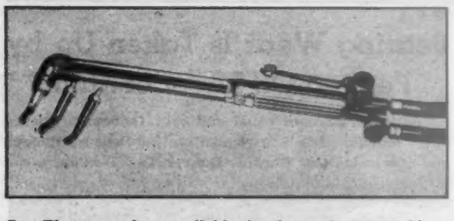
Oil Well Engineering Corp., Houston, Tex., has granted a license to Hunt Tool Co. to manufacture and handle on a royalty basis the Oweco Straight-Hole drilling bit. This special bit was introduced to the field early in 1938 as an effective, simple method of straightening crooked holes. Since that time it has been improved to handle such jobs as sidetracking junk in open hole without the use of cement plug and for underreaming, since this bit cuts a larger hole than conventional drag bits due to its eccentric blade. Oil Well Engineering Corp. will continue to manufacture and rent the bit as in the past.

Proctor Handling Red-Rex Sales

W. S. Proctor has been appointed to the sales force of Oil City Brass Works, Beaumont, Tex., manufacturer of Red-Rex pipe unions. Mr. Proctor is a mechanical engineering graduate of Cornell University and for the past 14 years has been associated with Regan Forge & Engineering Co., lately serving this concern as Mid-Continent manager in charge of sales. In his new post he will have headquarters in Houston, Tex., and will be in general charge of the sales of Red-Rex pipe unions throughout the Gulf Coast area.

Large Oxygen Jet Delivered at Low Velocity by New Nozzle

A series of new oxyacetylene gouging nozzles, for use with a standard hand-cutting blowpipe, such as the Oxweld C-32, has been announced by Linde Air Products



Co. These nozzles, available in three sizes, provide a means for quickly and accurately removing a narrow strip of surface metal from steel plate, forgings, and castings.

The nozzles are so designed as to deliver a relatively large jet of oxygen at low velocity. By proper manipulation of the blowpipe in which the nozzle has been inserted, a smooth, accurately defined groove can be cut or gouged out of the surface of the metal. By using various standard-size nozzles and manipulations the groove can be varied in width and depth at the will of the operator.

Important uses for these nozzles include gouging the underside of electric welds; removal of weld metal, such as temporary tack welds and defective welds; preparation of plate edges for welding; and maintenance and scrapping operations.

Emco Sponsors Study Course

A 2-year course of instruction in the fundamental sciences necessary to the natural-gas and petroleum industries has been inaugurated by Pittsburgh Equitable Meter Co., Pittsburgh, Pa., for its employes. The course is under the supervision of the extension division, Pennsylvania State College. The 60 men enrolled meet once each week. Instructors are men recruited from the engineering department of the company under the direction of the chief engineer, A. D. McLean. Supporting them will be lecturers from Pennsylvania State College and other institutions.

Brown Receives Vermilye Medal

The Franklin Institute of the State of Pennsylvania has made its first award of the Vermilye Medal "in recognition of outstanding contribution in the field of industrial management" to Lewis H. Brown, president of Johns-Manville Corp. The medal was presented to Mr. Brown by Philip C. Staples, president of the institute, at a dinner in Philadelphia, Pa., attended by industrialists and business leaders from throughout the East.

New Jensen Building Designed For Efficiency and Comfort

This is a night view of the new office building of Jensen Brothers Manufacturing Co., Coffeyville, Kans., where the firm's manufacturing facilities are located.

The building is a modern structure, 40 by 80 ft., one story with full basement, and for efficiency's sake lacks many of the right angles common to more conventional architecture.

The exterior walls and the partitions have Pittsburgh glass block panels. The floor is of steel and concrete surfaced with Bruce oak blocks. The roof is also of steel and concrete, with provision for 3 in. of water on the room in summer months to insulate the building from heat. The ceilings are of Masonite. The doors and trim are Philippine mahogany. The windows are glazed with tinted Solex glass, supplemented with Helophane lighting. A hot-air heating system, gas-fired, provides winter comfort, and a Teletalk system facilitates interoffice communication.

The company has manufactured Jensen pumping equipment exclusively for more than 20 years. The line includes rod-line jacks and pumping units for wells of any depth.

Patterson GE Manager in Tulsa

With the promotion of A. L. Jones to manager of the central station department of the southwestern district of the General Electric Co., with headquarters in Dallas, Tex., Earl F. Patterson has been made manager of the Tulsa office. Mr. Patterson was transferred to the Tulsa office of General Electric Co. in 1927, and has spent most of his time specializing in the application of electrical equipment to the oil industry in the Mid-Continent area.

New Hercules Tubing Head

Hercules Tool Co. is now in production on its new stripper-type tubing head, the Type K. Its conspicuous feature is the low cost of stripper-rubber replacement. "Snubbing in" of tubing is eliminated. Made of electric steel throughout, it is recommended for 2,000 lb. test pressure. The new head is fully described in the company's Bulletin No. 36.

Here and There With Men Who Manufacture Equipment

L. S. (Spider) Allen visited the plant of the American Rolling Mill Co., in Middletown, Ohio, last week. He represents this company in Tulsa.

Chicago offices of the Smith Meter Co., subsidiary of A. O. Smith Corp., Milwaukee, Wis., have been moved from 310 South Michigan Avenue to the Petroleum Building, 616 South Michigan Avenue. J. F. McDonald is manager.

Charles E. Wilson, executive vice president, was elected president, and Philip D. Reed, assistant to the president, was elected chairman of the board of directors of General Electric Co. They succeed Gerard Swope and Owen D. Young, who will become honorary president and honorary chairman of the board, respectively.

Spang Chalfant, Inc., Pittsburgh, Pa., has appointed Charles W. East district manager of sales in St. Louis, Mo. He succeeds R. M. Burk, who about January 1 will join National Supply Co. in Tulsa. Mr. East was formerly district sales manager for Republic Steel Corp. in Houston, Tex.

Coppus Engineering Corp., Worcester, Mass., has appointed the following new district representatives: Rees V. Downs, 422 Exchange Building, Memphis, Tenn.; Hughes Machinery Co., 342 Manufacturers Exchange Building, Kansas City, Mo.; L. D. McKay, 533 Mayo Building, Tulsa.

J. B. Spotswood, resigning as branch operating manager of United States Rubber Co., Chicago, November 30, plans to reside on his farm in Virginia. Succeeding Mr. Spotswood will be W. J. Laliberte, branch operating manager in Kansas City. C. A. Gray, branch operating manager in Buffalo, N. Y., who has been transferred to Kansas City, will be succeeded in Buffalo by H. A. Dathe, of the company's headquarters staff in New York.

Bucyrus-Erie Co., South Milwaukee, Wis., has appointed J. F. Tait district manager of the Pittsburgh, Pa., sales district with offices in the Clark Building, Pittsburgh. Mr. Tait, who was in charge of the Philadelphia, Pa., office, succeeds P. B. Heisey, who resigned to enter business for himself.

C. W. Metzger, Houston, Tex., district manager of Haynes Stellite Co. for the past 14 years, has left for an extended visit to South America, visiting most of the important oil fields. Mr. Metzger is regarded as an authority on hard facing, having pioneered in the hard facing of oil-well drilling tools.

Blocks of New Type Introduced by McKissick Products Corp.

McKissick Products Corp., Tulsa, has added to its line two newly designed and proved blocks that are said to be getting a favorable reception from drilling and production men.

The McKissisk tong block was suggested by drillers who stressed the need for a quick-opening block for handling tong lines in the derrick. Blocking is accomplished with a new-type pen, designed to

assure safety and speed in handling. The block, light in weight, is provided with Alemite lubrication and Hyatt roller bearings. The sheave is 8 in. in diameter and grooved to line sizes to ⅞ in. There is a 2-in. opening in the eye or safety hook.

The Peerless snatch block was designed with a safety lock which permits quick opening without sacrificing strength. Spring plunger in the locking key holds it in position until released by a simple turn to the right. This block is available for use with wire line or manila rope and is manufactured in two sizes, 6 and 8-in. sheave diameters. It is provided with Alemite lubrication and may be ordered with swivel clevis or swivel hook.

New Toledo Handy Stand Easy To Assemble or Take Apart

Recently placed on the market by Toledo Pipe Threading Machine Co., Toledo, Ohio, is a handy stand with open-side pipe vise, capacity ⅛ to 2½-in. pipe. A tool tray and a pipe bender with a capacity up to 1-in. pipe or conduit accompany the stand.

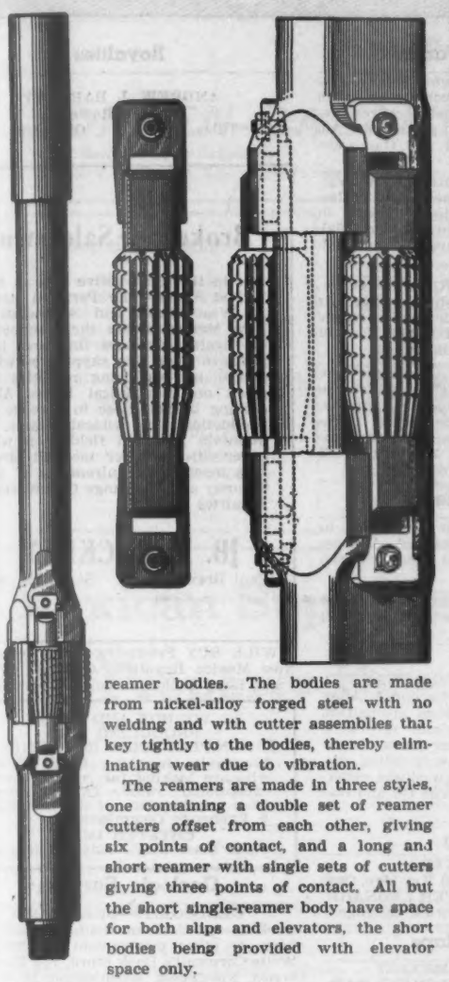
This new handy stand can be furnished with or without the vise, tool tray, and pipe bender. No legs or connecting pieces are furnished. The operator can make the legs or center connecting piece any length he desires. It is recommended, however, that the legs be 42 in. long, made from 1-in. pipe, and the center piece be made 20 to 24 in. long of 1¼-in. pipe. The legs and center piece are held in place by U-bolts, and the device is easily and quickly assembled or disassembled.

Jarecki Store in Carmi

In Carmi, Ill., in the center of White County, Jarecki Manufacturing Co.'s newest supply store is stocked with drilling and production equipment to meet needs of operators in that area. Francis Bannon is manager, with Paul Carpenter and Harper Barrett salesmen.

Design of CP Oil-Well Reamer Stops Wear From Vibration

CP oil-well reamers, offered by Chicago Pneumatic Tool Co., Chicago Pneumatic Building, New York, cover the range of sizes from 5⅝ to 19 in. with eight



reamer bodies. The bodies are made from nickel-alloy forged steel with no welding and with cutter assemblies that key tightly to the bodies, thereby eliminating wear due to vibration.

The reamers are made in three styles, one containing a double set of reamer cutters offset from each other, giving six points of contact, and a long and short reamer with single sets of cutters giving three points of contact. All but the short single-reamer body have space for both slips and elevators, the short bodies being provided with elevator space only.

The range of sizes, in inches, follows: 5⅝ to 6¾, 7⅞ to 9, 9⅞ to 10⅞, 13¼ to 16, 6⅞ to 7½, 9½ to 10, 11 to 13, 16¼ to 19. Their simple construction, strength, and low upkeep cost are said to commend them to drillers.

Worthington Office Changes Hands

Beginning December 1, 1939, the business heretofore carried on by Worthington Machinery Corp. of Oklahoma at 424 North Boulder Avenue, Tulsa, will be taken over direct by Worthington Pump & Machinery Corp. as its district office and at the same address. The district manager will be J. O. Lewis, already well known in that territory. Worthington Machinery Corp. of Oklahoma will remain in existence for the present to settle current business and to collect its outstanding accounts.

Trade Literature

HOBART BROTHERS Co., Troy, Ohio.—Handbook, Hobart welding electrodes and accessories.

UNION WIRE ROPE CORP., Kansas City, Mo.—"Rope Dope," an educational bulletin on caring for wire rope.

WALWORTH CO., 60 East Forty-second Street, New York.—Bulletin, Walworth Ni-Resist pipe.

INTERNATIONAL HARVESTER ORGANIZATION, 180 North Michigan Avenue, Chicago.—November number International Power.

LINCOLN ELECTRIC CO., Cleveland, Ohio.—Welder specification bulletin 308, 200-ampere "Shield-Arc Junior."

ANDREW C. CAMPBELL DIVISION, AMERICAN CHAIN & CABLE CO., INC., Bridgeport, Conn.—Catalog 302, abrasive cutting machines, with illustrations of machine set-ups for regular and special jobs, and concise information.

ALCO PRODUCTS DIVISION OF AMERICAN LOCOMOTIVE CO., 30 Church Street, New York.—Bulletin, Alco pressure vessels and heat exchangers.

C. J. TAGLIABUE MANUFACTURING CO., Park and Nostrand Avenues, Brooklyn, N. Y.—Catalog 1125C, new industrial thermometers.

AMPCO METAL, INC., Milwaukee, Wis.—Engineering data sheet 70, "Crane Valves and Fittings from Ampco Metal."

D. W. HAERING & CO., INC., 2308 South Winchester Avenue, Chicago.—Second printing of booklet, "The Art of Proportioning."

FOXBORO CO., Foxboro, Mass.—Booklet, "Foxboro and Foxboro," telling interestingly in its 16 pages about the town and the company.

AIR REDUCTION SALES CO., 60 East Forty-second Street, New York.—Bulletin, Airco No. 10 Planograph.

J. E. LONERGAN CO., 211 Race Street, Philadelphia, Pa.—Supplementary catalog 600, valves, gages, and engineering data.

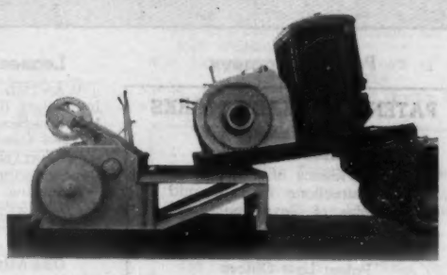
WYATT METAL & BOILER WORKS, Houston and Dallas, Tex.—November-December number the Wyatt Way.

ALLIS-CHALMERS MANUFACTURING CO., CENTRIFUGAL PUMP DIVISION, Milwaukee, Wis.—Bulletin B-6018, "How to Get More Gallons at Less Cost," a revised edition on close-coupled pumps.

BUDA CO., Harvey, Ill.—Bulletin 981, spotting company's stores and service stations; Bulletin 982, power-data chart for Buda oil-field gas-gasoline engines.

Combination Unit Meets Needs of Scattered Oil Operations

A lease service-hoist and spudder unit that is unusually versatile is offered by Unit Rig & Equipment Co., Tulsa. While the combination service-hoist and



auxiliary spudder unit does not entirely supplant the conventional double-drum spudder unit, it does offer an answer to the needs of operators having scattered operations, and where they wish to handle their equipment with their limited lease trucking facilities.

Unit Rig standard single-drum service hoists can be used for pulling rods and tubing and for bailing and swabbing. When it is necessary to fish, clean out, deepen wells, or tail-in after rotaries, the U-19 auxiliary spudder unit, consisting of sand reel and spudder, can be set in at the well and the single-drum service hoist can be quickly connected to it, making a rigid combination double-drum spudder unit.

Companies now owning Unit Rig single-drum units can purchase the U-19 auxiliary spudder unit and have this practical combination.

Bridgeport Opens Illinois Branch

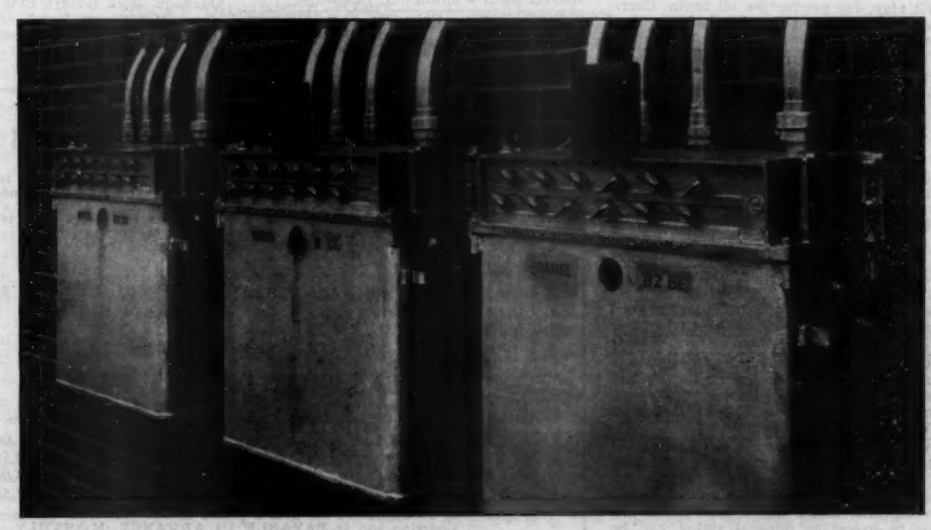
Bridgeport Machine Co., Wichita, Kans., has opened in Keensburg, Ill., another branch store in the Illinois-basin area. This store is stocked with products manufactured by Bridgeport and those it distributes for other manufacturers. Other Bridgeport branches in the Illinois basin are at Griffin, Ind., and St. Elmo and Salem, Ill. The district office for the territory is at Mount Vernon, in charge of Hugh Bergin.

Contracts Go to Ingersoll-Rand

Ingersoll-Rand Co. has been awarded contracts for the condensers, condenser pumps and boiler feed pumps for a 19,405-ton all-welded tanker to be built for Atlantic Refining Co. at the Sun Shipyards, Chester, Pa. When the new vessel is delivered late in 1940, the Atlantic tanker fleet will contain the world's largest four welded ships.

PROTECTS LIGHTING CIRCUITS IN HAZARDOUS LOCATIONS

New oil-immersed panel boards, using thermal-trip branch circuit breakers, for the protection of lighting circuits in locations exposed to corrosive elements and explosion-hazardous atmospheres have been announced by Westinghouse Electric & Manufacturing Co. A new thermal-trip breaker has been developed for these panel



boards to insure practically constant tripping characteristics regardless of temperature changes.

The new breaker has a compensating bimetal mounted outside the chamber on the breaker frame in which the main tripping bimetal is enclosed. This compensating bimetal is affected only by the general temperature of the whole tank of oil. Its motion is transmitted to the tripping bimetal through a link, thermally and electrically insulating the two members and passing through a small clearance opening in the breaker wall. The base of the tripping bimetal is pivoted, and while its deflection is dependent jointly upon the current and general oil temperature, the pivoted base is moved just enough by the compensating bimetal to neutralize that part of the deflection of the tripping bimetal which is due to the general oil temperature. This makes the free end of the tripping bimetal responsive only to the load current.

The breaker is compensated within commercial limits, permitting 0 to 10 per cent decrease in rating when the surrounding oil temperature is 140° F., and 0 to 10 per cent increase in rating at oil temperature of 10° F. At 75° F. the deviation is zero and at intermediate temperatures the limits are proportionate.

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SACRIFICE 40-acre Oil Lease, Chaves County, for only $10.00, full price. Guarantee title. P. O. Box 191, Clovis, N. Mex

NEW MEXICO WEEKLY OIL SCOUT REPORT.—Send for sample copy. Roy G. Barton, Box 968, Hobbs, N. M.

FOR SALE Oil and gas leases and small production located in Kentucky shallow field, and leases located in Clay County, Tenn. Have for sale two tracts of proven Fluorspar and Zinc deposits; reports furnished on request. W. P. Harley, Bowling Green, Kentucky.

MISSISSIPPI THE NEW OIL STATE
Leases, royalties and drilling blocks apply J. P. Fraim, Edwards Hotel. Jackson, Miss.

FOR Lease 400 acres in Mound Township, Effingham County in Sec. Four and Five. Four miles from St. Elmo and Bucher City Oil fields. E. R. Stroud, Altamount, Illinois.

LIMA Ohio Oil fields should have deep well play, for productive oil basin. Correspondence solicited. JULES BARND, Faurot Building, Lima. Ohio.

EAST TEXAS Trinity sand wildcats will drill shortly Humble, Shell and Texas company blocks afford chance quick money. Leases-Royalties. E. CROFT, PROCTOR, TEXAS.

NEW MEXICO
STATE OIL AND GAS LEASES
Buy on known structures where major companies own leases. 50c per acre. 5c rentals. Write for information.
HARRY S. WRIGHT, STATE LESSEE
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FARMINGTON, NEW MEXICO

NEBRASKA THE NEW OIL STATE
Represent owner of block of leases near west rim Forest City Basin. Offering good acreage deal for a well. J. M. Livingston, 317 North 11th St., Nebraska City, Nebr.

OVER 20,000 acres solid in best Texas Gulf Coast trend. Shooting rights, 25c per acre, selection $2.50 per acre. 8,000-ft. test required. Write or wire Tucker, P. O. Box 337, Corpus Christi, Texas.

WANT CAPITAL to invest in perpetual mineral rights in North Permian Basin in Texas and New Mexico in major company blocks on geophysical highs. Rapid development under way now. Now is the time to invest as mineral rights will be much higher after development starts on each block. Real opportunity. Address Box K-391, The Oil and Gas Journal, Tulsa, Okla.

PRIVATE CAPITAL available up to $75,000 for oil and mining ventures. Principals only. Address Box K-390, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE or lease: 2000 acres in Southern Illinois. Address F. N. ALBERTSEN, Perkin, Illinois, for details.

Leases and Drilling Blocks

WANTED offset or proven acreage for immediate development. Full details first letter necessary. Address Box K-371, The Oil and Gas Journal, Tulsa, Oklahoma.

LOUISIANA Leases. 320 to 15,000 acres. Concordia-Catahoula-La Salle Parishes. C. W. Deming, Reg. Dealer, Waycross, Ga.

FOR SALE LEASES in Sharkey County, Mississippi. Box 2701, Memphis, Tennessee.

OKLAHOMA OIL CONNECTION
Want man with cash and guts enough to come to Okla. City, get and drill 100% shallow available leases. No mail deals, no promotions, no brokerage. Address Box K-381, The Oil and Gas Journal, Tulsa, Oklahoma.

WANTED financially responsible part, interested in drilling 15000-acre block northeast Colorado. First National Bank, Fleming, Colorado.

For Sale—Geologic Surveys

FOR SALE—Geologic Surveys. Largest Stock of U. S. and State Geologic Surveys in country. Send list of wants to Cornwall's Book Store, 723 Eleventh Street, Northwest, Washington, D. C.

Mailing Lists

ROYALTY Lists. Oil Investor Lists Stockholders Lists. By states. Oil Industry Mailing List Co., Tulsa Loan Bldg., Tulsa Oklahoma.

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When all other methods fail, employ my divining or dowsing method. If oil exists this methods finds it. Faults, broken, treacherous areas accurately defined. Our Watson #2, first producer Wilmington, Calif. field, located by this method. More reliable than mechanical geophysics. Ask any unbiased oil authority. Many years' experience. A wise man investigates George Miller, 1548 Post, Torrance, Calif

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SINCE 1908 Burkhart's legal forms—servicing Mid-Cont. oil fields, including Ill., La., Mo., Ind. & Ky. Free catalog & samples. Burkhart Ptg. & Sta. Co., 115 So. Cinn., Tulsa, Oklahoma.

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DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G Guyer, Inc., Wilmington, Delaware.

CHARTERS—Delaware best, quickest, cheapest, more liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Situations Wanted

EXPERIENCED man, wholesale and retail marketing, wishes connection with marketer or as refinery sales representative. Southern territory preferred. Address Box K-382, The Oil and Gas Journal, Tulsa, Oklahoma.

MANUFACTURERS REPRESENTATIVE
An experienced and well acquainted salesman desires additional lines to sell, in Mid-Continent Area. Commission or Salary. Box K-291, The Oil and Gas Journal. Tulsa, Oklahoma.

REFINERY DESIGNING ENGINEER, 17 years' experience. Desires change. At present employed, Chief draftsman major oil company. Address Box K-380, The Oil and Gas Journal, Tulsa, Oklahoma.

OIL SPECIALIST tax consultant. Age 37, C.P.A. 14 yrs.' experience, which includes systematizing, financial reports, and diversified public accounting. Highest credentials as to integrity and creative ability. Address Box K-130, The Oil and Gas Journal, Tulsa, Oklahoma.

Help Wanted

ENGINEER with design experience in petroleum refining work, wanted. Address Box K-393, The Oil and Gas Journal, Tulsa, Okla.

DEALER in each settled production area. Good thing. Eclipse Chemical Co., Box 2603, Tulsa, Okla.

WANTED
SALES REPRESENTATIVES WANTED to sell well-known line of Carbon & Alloy Steel Castings and Cast Steel specialties. Crane wheels, conveyor chain sprockets, elevator buckets and similar parts. In reply advise lines you are now handling, district covered and previous business experience. Address Box K-392, The Oil and Gas Journal, Tulsa, Okla.

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CAPITAL SEEKERS
Put your project before 260 Key-Men. Cost trifling. Details free. AMSTER LEONARD Fox Theater Building, Detroit, Michigan

For Sale—Maps

TEXAS and NEW MEXICO
UP-TO-DATE OIL DEVELOPMENT MAP:
Zingery Oil Map Co., Fort Worth, Tex

R. B. ROBINSON MAPS
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Royalties

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

WILL BUY Producing West Texas and New Mexico Royalties. Oscar L. Grimes, Tulsa Loan Building, Tulsa, Oklahoma.

WE BUY AND SELL
PRODUCING AND
NON-PRODUCING ROYALTIES
We invite inquiries from dealers who are looking for royalties with exceptional value. (All offerings meet requirements of the Securities & Exchange Commission.)
CHESTER IMES
Tulsa Loan Bldg., Tulsa, Oklahoma

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GEOLOGISTS—SURVEYORS
Looking for U. S. or State Geologic Surveys, or other government publications? Write Cornwall's Book Store, 723 Eleventh Street, Northwest, Washington, D. C. Unusually large stock.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Equipment Wanted

USED submergible Electrical Centrifugal Oilwell Pump. 7 or 10 HP with cable for 6⅝" casing. State Price and Condition. J. Campbell, Spring Lake, Michigan.

WANTED—Miniature cracking plant complete. State condition, capacity and price. Hot Springs Refining Co., Hot Springs, So. Dak.

For Sale—Equipment

WE OFFER—STEEL DERRICKS
Fresh Painted—Excellent condition.
We still have a few left.
WERTZBERGER DERRICK CO.
P. O. Box 796
Tulsa, Oklahoma

FOR SALE—$80,000.00 Rotary Rig complete. 10-in. Emsco Unit, 125-350 Boilers, etc. Practically new. Bargain. Roberts Bros., Box 1322, Shreveport, La.

REFINERY FOR SALE—complete 3000-bbl. refinery, cracking and skimming plant, practically new, dismantled and ready for shipping, at sacrifice price. Louisiana Iron and Supply Co., Phone LD 21, Longview, Texas.

LINE PIPE FOR SALE AT BARGAIN
15,000 feet plain end 13# 6⅝" OD USED LINE PIPE. Located near Kincaid, Kansas. If interested write Box 2451, Tulsa, Oklahoma, or phone or write J. Kornfeld, Wichita, Kansas.

CLASSIFIED ADVERTISING RATES

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	$1.05	$1.80	$2.55	$3.30	7 Lines	$2.45	$4.20	$5.95	$7.70
4 Lines	1.40	2.40	3.40	4.40	8 Lines	8.80	4.80	6.80	8.80
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1 Inch	26 times	4.00 per inch
1 Inch	52 times	3.50 per inch

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

For Sale—Equipment For Sale—Equipment For Sale—Equipment

REFINERY EQUIPMENT—UNITED REFINERY

COMPLETE 3,000 BBL. SKIMMING PLANT — RUSSELL, KANSAS

Foster-Wheeler Fractionating Column — 6'6"1Dx72' high. New Taylor Instruments throughout. Heat Exchangers, Hot Oil Pump Steam Engine Driven, Two Pipe Stills. 1 - 3" Tubes — 1 - 2½" Tubes.

WILL SELL ALL OR ANY PART

WIRE — PHONE — WRITE

SONKEN-GALAMBA SUPPLY COMPANY

W. C. Berry or H. J. Galamba,
Riverview at Second, Kansas City, Kansas

Robt. W. Duden,
2100 S. Union, Tulsa, Oklahoma

EMERGENCY NEED?

Freight Cars; any kind
Locomotives; all types
Relaying Rails
Freight Car Repair Parts
Perhaps *we* can supply your requirements, and *immediately?*
OTHER MACHINERY and EQUIPMENT, TOO!

IRON & STEEL PRODUCTS, INC.
13412 S. Brainard Ave., Chicago, Ill.
"Anything containing IRON or STEEL"

FOR SALE—Two excellent used B-K Pipe threading machines, 1" to 4" and 4" to 10", complete set of dies, A.P.I. Specifications. Die Grinding Machine included. Berry Pipe & Supply Co., McBirney Bldg., Tulsa, Oklahoma.

FOR SALE
POWER HOUSE EQUIPMENT
3—550 HP 5 cylinder Nordbery Diesel Engines direct connected to 400 KVA Burke Generators. Must develop quick sale. If interested write, BETHLEHEM SUPPLY CORP., Box 2171, Tulsa, Okla.

TRACTORS
Government crawler type Caterpillars, 5 ton $375, 10 ton $895, Slightly used. Perfect condition.
O. C. EVANS
Mt. Sterling, Ky.

FOR SALE
10,000 Ft. of 6" Pipe
25,000 Ft. of 2"
10,000 Ft. of 2½"
20,000 Ft. of 4"
35,000 Ft. of 3"
10,000 Ft. of 8"
All threaded and collared line pipe strictly No. 1 which is located in Shreveport, Louisiana.
We have also 30,000 Ft. of 6" screw line pipe in Oklahoma and 10,000 Ft. of 8" in Missouri.
Wire, Write or Phone for Prices
Louisiana Iron & Supply Co.
Shreveport, Louisiana

For Sale—Equipment

EQUIPMENT FOR SALE
2—Used Full Electric Diesel Powered Drilling Rigs—Complete with Drill Pipe.
1—Used Complete Steam Drilling Rig—Complete with Drill Pipe. A-1 Condition.
1—Complete Power End consisting of two 240-HP Fairbanks-Morse Engines with Sheldon-Burden Transmission for deep well drilling. Bargain.
For Inventory and Prices call or write
K. S. RICHARDS
P. O. Box 830 Fort Worth, Texas
Phone 2-1161

FOR SALE
Landis Pipe Threading Machine
Practically New, 2½-in. to 12½-in., Motor Driven, Extra Head and Dies, Very Reasonable.
SERVICE MACHINE COMPANY
421 No. Cincinnati Tulsa, Okla.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

FOR SALE 122-ft. Emsco drilling derrick—galvanized 437-lb. capacity. Practically new. Located Kaufman County, Ross W. Smith, 1400 S. Harwood St., Dallas, Texas.

Mexican Supreme Court Upholds Oil Property Expropriation

MEXICO CITY.—The Mexican Supreme Court has unanimously upheld the Government's expropriation of the foreign oil company property. It rejected the appeal of 17 American, British and Netherlands companies whose properties were seized by the government on March 18, 1938, and who contended the action was unconstitutional.

The four justices voted to sustain constitutionality of the expropriation of the companies' immovable properties, which was the principal issue. The court was divided, three to one, regarding the seizure of the companies' movable properties. Justice Maria Truchuelo dissented on the latter issue. The decision was on an opinion written by Justice Rodolfo Asian.

The decision of the highest Mexican court, it was said, "exhausts the last possibility of regaining the properties by legal action." Whatever is to be done toward return of the properties, oil men said, would have to be done by the State Department in Washington.

Unrest among the workers in the Poza Rica field last week resulted in posting federal troops in the area to guard against possible sabotage. The situation was brought about by reports that the Mexican oil monopoly is about to reduce production for lack of export outlets, thus eventually throwing a considerable number of men out of work.

The Poza Rica field is producing the greater part of Mexican oil, advice in this country indicating that the daily average withdrawal has exceeded 90,000 bbl. on several occasions since expropriation.

The gradual accumulation of additional aboveground crude-oil stocks in Mexico has practically exhausted storage facilities. There has been no relief in the restriction of Mexican exports since the European war started last September. Shipments are currently largely confined to South America, Italy, and to the United States where from 10,000 to 15,000 bbl. per day are refined for re-exportation.

Mexican Oil Agency Sued for Alleged Breach of Contract

HOUSTON, Tex.—The distribution agency for Mexican oil—Distribuidora de Petroleos Mexicanos—was sued for $400,000 damages today by Crowley Tar Products Co., Inc., of New York, for alleged breach of contract.

The petition alleged the firms had contracted for delivery to the New York company of 25,000 to 50,000 tons of petroleum asphalt, for resale to six provinces in the Commonwealth of Australia. The complaint alleged the Mexican organization failed to carry out the agreement.

The Crowley company also issued an attachment and a series of garnishments in an attempt to seize any Mexican petroleum products which might be stored in Houston or another Texas Gulf port.

The general manager of Distribuidora de Petroleos Mexicanos, J. Silva Herzog, denied reports that Mexico had contracted with an American company for the disposal of its entire exportable output.

Rocky Mountain Area

Production estimates for the week ended December 2 follow:

WYOMING

	Bbl.
Salt Creek	15,460
Big Muddy	1,190
Badger basin	130
Byron	4,720
Cody dome	60
Cole Creek	50
Dallas Derby	580
Dewey dome	10
Dutton Creek	30
Elk basin	660
Frannie	3,010
Garland	2,570
Grass Creek	1,750
Hidden dome	70
Hudson	240
Iron Creek	10
LaBarge	910
Lance Creek	22,330
Lost Soldier	1,840
Mahoney	200
Medicine Bow	1,390
Mule Creek	190
Oregon basin	3,220
Osage	600
Quealy dome	500
Rock River	2,470
Teapot	20
Warm Springs	140
Wertz	3,610
Total Wyoming	67,960

MONTANA

Border	200
Cat Creek	490
Cut Bank	10,860
Dry Creek	200
Kevin-Sunburst	4,410
Pondera	850
Total Montana	17,010

COLORADO

Florence	220
Fort Collins and Wellington	310
Wilson Creek	460
Iles dome	1,900
Moffat	390
Rangely	90
Tow Creek	130
Price	510
Total Colorado	4,010

NEW MEXICO

Cooper	3,960
Eaves	830
West Eunice	290
Eunice	21,140
Hardy	3,750
Hobbs	10,540
Jal	550
Langlie	5,140
Lynch	470
Lynn	920
Mattix	5,350
Monument	22,100
North Lynch	30
Penrose	5,290
Rhoades	110
Skaggs	90
Skelly	1,850
South Eunice	4,120
South Lovington	1,150
Vacuum	11,700
Loco Hills	780
Artesia-Maljamar	11,770
Getty	100
Hogback	200
Rattlesnake	690
Table Mesa	100
Halfway	50
Total New Mexico	113,070
Total Rocky Mountain region	202,050

Crude Oil and Gasoline Stocks in Illinois

Illinois production for October 1939 was estimated at 9,954,000 bbl. from new fields and 280,000 bbl. from the old fields by the Illinois State Geological Survey. This brings the total production of the state to 10,234,000 bbl. for the month or a daily average of 341,133 bbl.

There was an increase of 414,000 bbl. in the stocks of crude on hand from July 31 to August 31. The increase in storage from August 31, 1938, to the same date in 1939 amounted to 2,418,000 bbl.

Gasoline stocks decreased 2,327,000 bbl. from the end of July to the end of August but showed an increase of 421,000 bbl. over August 31 last year. Gas-oil and distillate-fuel stocks decreased 635,000 bbl. during August but showed an increase of 243,000 bbl. over August 31, 1938. There was a decrease of 36,000 bbl. in residual-fuel oil stocks from July 31 to August 31, and a decrease of 2,944,000 in the same stocks between August 31, 1938, and August 31, 1939.

Index to Advertisers

A

Abercrombie Pump Co.
Air Reduction Sales Co.
Alco Products Division—American Locomotive Company
Ajax Iron Works
Allegheny Ludlum Steel Corporation
Allis-Chalmers Mfg. Co.
American Bosch Corporation 3
American Cable Division of American Chain & Cable Co., Inc. Inside Back Cover
American Cast Iron Pipe Company
American Hoist & Derrick Co.
American Iron & Machine Works
American Meter Company 10
American Roller Bearing Co.
American Sand-Banum Co.
American Steel & Wire Company 2
Armstrong Machine Works 81
Atlas Supply Co.
Athey Truss Wheel Co.
Auer, C. L. and W. W.
Austin-Western Road Machinery Co., The
Axelson Manufacturing Company

B

Baash-Ross Tool Company
Babcock & Wilcox Tube Co., The
Badger & Sons Co., E. B. 54
Bakewell Manufacturing Co.
Baker Oil Tools, Inc. 12
Baldwin-Duckworth Division of Chain Belt Company
Ball Valve Seat Grinder Co., The
Bantam Bearing Corp.
Baroid Sales Company
Barret, William M., Inc.
Bastian-Blessing Co., The
Beckman, Inc.
Bechtel-McCone-Parsons Corporation
Bethlehem International Supply Company 1
Bethlehem Steel Co.
Billings & Spencer Co., The
Braden Steel Corporation
Bradford Motor Works, Inc.
Brewster Company, The
Bristol Company, The
Broderick & Bascom Rope Co.
Brown Instrument Company, The
Bruning, Charles Co., Inc.
Buckeye Traction Ditcher Co.
Bucyrus-Erie Co.
Burgess Battery Co.
Butler Manufacturing Co.
Byron Jackson Co.

C

Cable, Jo H.
Cameron Iron Works, Inc.
Cardwell Mfg. Co., Inc.
Carey Company, The Philip
Carnegie-Illinois Steel Corporation
Cast Iron Pipe Research Association, The
Caterpillar Tractor Co. 8-9
Century Electric Company
Chain Belt Company
Chaplin-Fulton Mfg. Co., The
Chapman Valve Mfg. Co., The
Chemical Process Co., Inc., The
Chevrolet Motor Division, General Motors Sales Corporation
Chicago Bridge & Iron Company
Chiksan Tool Co.
Clark Brothers Company
Classified Advertising 110-111
Cleveland Trencher Company
Climax Molybdenum Company 51
Columbia Steel Company 2
Columbian Steel Tank Co.
Continental National Bank of Fort Worth
Continental Oil Co.
Continental Motors Corp.
Continental Supply Company, The 62
Cooper, Fred E.
Cooper-Bessemer Corp., The
Core Laboratories, Inc.
Crane Co.
Cummins Engine Co.
Curtin, W. H., & Co., The

D

Darling Valve & Mfg. Co. 84
Davis Regulator Co.
Dayton Rubber Mfg. Co., The
Dearborn Chemical Co.
Diamond Chain & Mfg. Co.
Dodge Mfg. Company
Dowell, Incorporated
Dragon Mfg. Co., The
Dresser Mfg. Co.
Drilling Equipment Directory
Du Pont de Nemours & Co., Inc.

E

Eagle-Picher Lead Co.
Eastman Oil Well Survey Co.
Economy Electric Lantern Co.
Edward Valve & Mfg. Co., The
Emsco Asbestos Company
Enardo Foundry & Mfg. Co.
Ensign Carburetor Company, Ltd.
Ethyl Gasoline Corporation

F

Failing, George E., Supply Company
Fairbanks-Morse & Co.
First National Bank of Fort Worth
First National Bank in Houston
First National Bank & Trust Co. of Tulsa, The
Fisher Governor Company
Fluid Packed Pump Co.
Fluor Corporation, Ltd., The
Ford Motor Co.
Fort Worth Chamber of Commerce
Fort Worth Clearing House Association
Fort Worth National Bank, The
Foster Wheeler Corp.
Foxboro Co., The
Franks Manufacturing Corp.
Frick-Reid Supply Corporation

G

Garden City Publishing Co. 87
Gardner-Denver Company
Gariock Packing Company, The 81
Gaso Pump & Burner Mfg. Co.
Gasoline Products Co., The
Gates Rubber Co., The
Gatke Corporation
General American Transportation Corporation—Terminal Division
General Electric Company
General Paint Corporation
General Power, Inc.
Geophysical Service, Inc.
Gilmer Company, L. H.
Gilmore Wire Rope Division of Jones & Laughlin Steel Corporation 5
Girdler Corporation, The
Goodall Rubber Co.
Goodyear
Gott, H. P., Mfg. Co.
Graver Tank & Mfg. Co., Inc.
Great Lakes Steel Corporation
Guiberson Corporation
Gulf Oil Corp. 6
Gulf States Utilities Co.

H

Halliburton Oil Well Cementing Co. Inside Front Cover
Hanlon-Buchanan, Inc.
Harnischfeger Corporation
Harrisburg Steel Corporation
Hazard Wire Rope Division of American Chain & Cable Co., Inc.
Hewitt Rubber Corp.
Hill-Hubbell & Co.
Hoard Exploration Company 93
Houston Engineers, Inc.
Houston Lighting & Power Company
Houston Oil Field Material Co., Inc.
Hughes Tool Co. Back Cover
Humble Oil & Refining Co.
Hunt Tool Co.
Hydril Co.
Hynd, I. W.

I

Independent Exploration Company
Inferno Co., The
Ingersoll-Rand Co.
International Geophysics, Inc.
International Harvester Co.
International Nickel Company, Inc., The
International Petroleum Exposition

J

Jarecki Manufacturing Company
Jensen Brothers Manufacturing Co.
Jerguson Gage & Valve Co.
Johns-Manville Corporation 74
Jones & Brooks, Inc.
Jones Company, S. M.
Jones & Laughlin Steel Corporation 5

K

Kellogg, M. W., Company, The
Kennedy Valve Mfg. Co., The
Keuffel & Esser Co.
Key Company
Kinzbach Tool Co.
Kobe, Incorporated
Kropp Forge Company

L

Landis Machine Co., The
Lane-Wells Co., The
Larkin Packer Company, Inc.
Layne and Bowler Co., The
Layne & Bowler, Inc.
Leeds & Northrup Co.
Lennox Hotel 83
Le Roi Company
Leschen, A., & Sons Rope Co.
Lincoln Electric Company, The
Line Scale Co., Inc.
Link-Belt Company
Lockheed Aircraft Corporation
Lone Star Cement Corporation
Lonergan, J. E., Co.
Ludlow Valve Mfg. Co., The
Lufkin Foundry & Machine Co.
Lufkin Rule Co.
Lummus Co., The
Lunkenheimer Co., The

Mc

McCord Radiator & Mfg. Co.
McEvoy Company
McGregor Working Barrel Company
McKissick Products Corp.

M

MacClatchie Manufacturing Company
Macwhyte Co.
Magnolia Airco Gas Products Co.
Maloney Tank Mfg. Co.
Manhattan Rubber Mfg. Division
Marley Company, The
Marmon-Herrington Co., Inc.
Marsh, James P., Corp.
Martin-Decker Corp.
Mathey Machine Works, C. A.
Mayfair Hotel
Medart Company
Meehanite Research Institute
Merco Centrifugal Co.
Merco Nordstrom Valve Co.
Merla Tool Co.
Metric Metal Works 10
Midco Bailer Co. 71
Mid-Continent Supply Co.
Midwest Piping & Supply Company, Inc., The
Midwestern Engineering & Construction Co.
Miller Sand Pump Co.
Mission Mfg. Co., The 56
Monsanto Chemical Company
Moore, Lee C., and Co., Inc.

N

National Bank of Tulsa
National Carbon Co., Inc.
National Lead Company
National Supply Co., The 45
National Transit Pump & Machine Co. 48
National Tube Co.
Naylor Pipe Company
New Bedford Cordage Co. 70
New Deal Specialty Co., The
Newman, Hender & Co., Ltd.
Nitrose Company, Inc., The
Non-Corrosive Products Company
Novo Engine Co.

O

O'Bannon Co., Walter
Ohio Injector Co., The
Oil Center Tool Co.
Oil City Brass Works
Oil Well Supply Company 47
Osage Metal Company 71
Otis Pressure Control, Inc.

P

Pacific Pump Works
Page Fence Association
Page Steel & Wire Division of American Chain & Cable Co.
Parkersburg Rig & Reel Co.
Parkhill-Wade
Patent Fuels and Color Corp.
Patterson-Ballagh Corporation
Peerless Pump Division of Food Machinery Corp. 70
Penberthy Injector Co.
Pennsylvania Grade Crude Oil Association
Perco, Inc.
Petroleum Advisers, Inc.
Petroleum Electric Power Association
Petroleum Rectifying Company
Petty Geophysical Engineering Company
Phelps Dodge Refining Corporation
Pittsburgh-Des Moines Steel Company
Pittsburgh Equitable Meter Co.
Pittsburgh Steel Company
Plymouth Cordage Co.
Pomona Pump Co.
Price Co., H. C.
Pritchard, J. F., & Co.
Producing Equipment Directory
Pure Oil Co.

R

Reading-Pratt & Cady Division of American Chain & Cable Co.
Rector Well Equipment Co., Inc.
Reda Pump Co.
Reed Roller Bit Company 52-53-71
Regan Forge & Engineering Co.
Reilly Tar & Chemical Corporation
Republic Rubber Division of Lee Rubber & Tire Corp.
Republic Steel Corporation 60-61
Robinson Orifice Fitting Co.
Rockford Drilling Machine Division of Borg-Warner Corporation
Roebling's Sons Company, John A.
Ryerson & Son, Inc., Joseph T. 83

S

St. Joseph Forward Association
Schlumberger Well Surveying Corporation
Security Engineering Co.
Seismic Explorations, Inc.
Seismograph Service Corp.
Shafer Bearing Corporation
Shaffer Tool Works
Shand & Jurs Co.
Shell Oil Company, Incorporated
S.K.F. Industries, Inc.
Skinner Co., M. B.
Smith, A. O., Corporation
Smith Company, E. M.
Smith, H. C., Tool Co. 70
Smith Company, Howard
Smooth-On Mfg. Co., Inc. 83
Socony-Vacuum Oil Co., Inc.
South Chester Tube Co.
Southwestern Gas & Electric Company
Spang Chalfant, Inc.
Spang & Company, Inc.
Sperry-Sun Well Surveying Co.
Spicer Mfg. Corp.
Standco Brake Lining Co. 70
Stearns-Roger Manufacturing Co.
Subterrex

T

Taylor Forge & Pipe Works
Taylor Instrument Companies
Templeton, Kenly & Co.
Texaco Development Corporation
Texas Iron Works
Thermoid Rubber
Thornhill-Craver Co., Inc. 71
Timken-Detroit Axle Co.
Timken Roller Bearing Company 7
Timken Roller Bearing Company Steel and Tube Division
Tobin, Edgar, Aerial Surveys
Toledo Pipe Threading Machine Co., The
Trackson Company
Tretolite Co. Front Cover
Trinity Portland Cement Company
Tubbs Cordage Co. 71
Tube-Turns, Inc.
Tulsa Boiler & Machinery Co.
Tulsa Chamber of Commerce
Twin Disc Clutch Co.

U

Union Wire Rope Corporation
Unit Rig & Equipment Company
United Geophysical Co.
United States Steel Corp., Subsidiaries 2-47
United States Steel Products Company 2-47
Universal Atlas Cement Co.
Universal Exploration Co.
Universal Oil Products Co. 42

V

Vickers, Inc.
Viking Pump Co.
Visco Products Company 41
Vogt, Henry, Machine Co.

W

Wall-Colmonoy Corp. 85
Wall Rope Works, Inc.
Walworth Co.
Warren Petroleum Corporation 67
Watson-Stillman Co., The
Waukesha Motor Co.
Wedge Protectors, Inc.
Westinghouse Electric & Mfg. Co.
Weston Electrical Instrument Co.
Whitney Chain & Mfg. Co., The
Wickwire Spencer Steel Company
Williams & Co., J. H.
Wilson Manufacturing Co.
Wisconsin Motor Corporation
Witte Engine Works 87
Worthington Pump & Machinery Corporation
Wyatt Metal & Boiler Works

Y

Young Engine Corp.
Youngstown Sheet & Tube Co.

Z

Zink Burners, John

The Oil Man's Calendar appears on Page 32